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August 8, 2008 Volume 30 Number 32 www.processor.com



The Push To Monitor Power

Economy, Environmental Responsibility Continue To Drive Demand To Scrutinize Power

by Christian Perry

WANT A CHALLENGE? Try living a day in the IT world without encountering discussion of saving power and "going green." Increasingly, the industry is becoming consumed with the notion of tackling excessive energy consumption, particularly as the economy continues to struggle. But while the hype behind this movement is strong, there's plenty of substance to back it up, along with a real need to monitor power use.

"Overall data center energy consumption is projected to double in the next four years, in part because energy efficiency gains lag while data center waste grows," says Peter Dougherty, presi-



dent and CEO of OnPATH Technologies (www.onpathtech.com). "As the price of oil continues to rise, it's only natural for data

center managers and other executives to scrutinize their power consumption and look for ways to trim spiraling energy bills."

Beyond the push to save money, there's also a building sense of environmental responsibility. Gartner has found that information and communications technology accounts for 2% of global carbon dioxide emissions, placing the IT industry on par with the aviation industry. In particular, Gartner has found that data centers account for nearly a quarter of global information and communications technology CO₂ emissions.

Focus On Power

Common sense might rule that massive data Go to Page 10

Unraveling Windows 7

A Look At The New OS & How It Compares To Previous Iterations

by Carmi Levy

ALTHOUGH WINDOWS 7 is still at least 18 months away from availability, it's already casting a shadow on the operating system plans of IT decision makers. And while early speculation is building, it may be too soon to commit.

"Whatever we've heard about it should be taken with a grain of salt. It's too early to talk about Windows 7, and it's surprising that Microsoft is doing so," says Michael Gartenberg, vice president and research director of JupiterResearch. "Microsoft should instead be focusing its attention on accelerating corporate and consumer use of Vista."

Not much is definitively known about Windows 7. Originally known as Black-comb and later Vienna, Windows 7 is Microsoft's internal name for the next major version of its iconic OS. Although the company hasn't made any official announcements, thinly veiled references by

senior leaders and leaks of screenshots to the Internet have fueled speculation. For his part, however, Gartenberg says the company is getting ahead of itself.

"There are two franchises that Microsoft cannot afford to mess with," says Gartenberg, "Office and Windows. And while Vista is an excellent product, it is not perceived that way. So it's going to have to work on this well before Windows 7 ships."

Learning Lessons From Vista

Gartenberg says Microsoft is making the same mistakes it made with Longhorn, the early code name for both Windows Vista and Windows Server 2008.

"The company is showing features too early and talking about things that may or may not make it into the final product," he says. "It's over-promising and under-delivering. If IT managers try to make plans based on what Microsoft is saying, that's

Go to Page 10

Windows 7 is already casting a shadow on the OS plans of IT decision makers.

In This ISSUE

COVER FOCUS

Managing Data Center Power Use

With increasing demands on today's enterprise budgets and a push for companies to "go green," there's a real need to monitor and manage your data center power. We show you how.

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The Right Email Archiving Program | 25

With the help of email archiving programs, some of the issues surrounding email retention can be eschewed.

The "Business" iPhone | 26

While the iPhone 3G is certainly ready for business, there are things IT should know and do to prepare for its arrival.

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Because data is a hot commodity in any small to midsized enterprise, it's important to keep it in a safe, reliable storage system. So how can enterprises accurately evaluate, track, and plan storage system performance?

Product Releases | 18

■ Advanced Industrial Computer released the G-Series SAS/SATA storage server chassis product line. ■ AFCO Systems released a trio of power distribution solutions: Basic, Metered, and Smart. ■ Asempra Technologies unveiled the Asempra Business Continuity Server 2.7, software that allows companies to recover Microsoft applications and data in seconds. ■ Cemaphore Systems announced version 2.3 of its MailShadow Enterprise solution for Microsoft Exchange. ■ The Liebert Challenger ITR is a new horizontal-flow cooling system for data centers from Emerson Network Power.

its network configuration change management solution, Solsoft ChangeManager. ■ KACE unveiled the KBOX Virtual Remote Appliance, which provides remote operating system provisioning. ■ Minicom Advanced Systems launched the Smart 216 IP and Smart 232 IP remote-access KVM switches. ■ The Mobile-NAS MN4L+ from Sans Digital is a 4-bay NAS that can be connected as DAS using iSCSI.

■ Exaprotect announced the latest version of

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SECURITY **A**UGUST 8, 2008

No-Hassle Password Management

Cloakware's Server Password Manager v3.5 Offers **Upgraded Deployment & Integration Features**

PRIVILEGED AND A2A (application-to-application) password management is a powerful way to maintain security for any company, yet many enterprises eschew this protection because of its prohibitive cost. Cloakware offers a more cost-effective solution to this

issue with the release of CSPM (Cloakware Server Password Manager) version 3.5.

CSPM is a Shared Account Password Management platform designed to support data centers of various types, including multisite, heterogeneous, and high-volume centers. CSPM is designed to offer ensured high availability in distributed networks and improved integration with homogeneous data centers, all without disrupting the system or causing downtime.

CSPM utilizes streamlined deployment options, improved integration into existing environments, scalability, and availability to help companies improve compliance, protect confidential data, decrease system downtime, and reduce operational costs.

CSPM allows regular password changes and password policies to be applied to server-based accounts. It eliminates hard-coded passwords by removing the need to share passwords with developers, so the problem of needing to create a new password doesn't require redeployment of applications.

Other features of CSPM include reliability across multiple sites and plug-and-play application server support. Deployment options enable one CSPM deployment to act as a primary core with support for multiple remote data centers.

Cloakware Server Password Manager v3.5

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NETWORKING & VPN AUGUST 8, 2008

Manage Media Networks

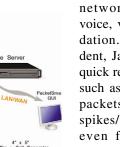
Packet Island PacketSmart-Lite Platform **Troubleshoots Voice & Data Networks**

PACKETSMART-LITE, an entry-level version of Packet Island's PacketSmart platform, is ideal for small and medium-sized businesses. PacketSmart-Lite includes everything needed to quickly and reliably troubleshoot voice/data networks for up to 10 different sites of 50 to 200 phones each. Each platform comes with a Linux-based Dell server fully loaded with Packet Island's proprietary PacketSmart software component and five compact micro appliances that

provide sniffing and call generation capability SIP.

from each site remotely. Each microappliance can handle up to 20 concurrent calls.

MGCP, and Cisco proprietary signaling protocols are supported.



The PacketSmart platform provides convenient 24x7 remote monitoring for each site, allowing deep visibility into

network issues that cause voice, video, and data degradation. A browser-independent, Java-based GUI allows quick retrieval of critical data, such as jitter, MOS, dropped packets, router path, traffic spikes/transient effects, and even full packet capture. Comprehensive reports are available to give you a reliable and automated snapshot of the state of your network.

IT administrators can use the solution to perform the following functions:

- Assess data networks for VoIP readiness
- Troubleshoot VoIP signaling issues Verify LAN/WAN QoS design based on
- TOS or Diffserv • Monitor live VoIP calls on a 24x7 basis
- Remote packet capture with
- Ethereal/Wireshark compatibility
- Monitor Top-10 data flows
- Generate a variety of on-demand reports

Packet Island's PacketSmart-Lite

Starts at \$8,000

Troubleshoots voice/data networks for up to 10 different sites of 50 to 200 phones each

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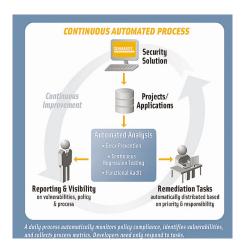
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SECURITY AUGUST 8, 2008

A New Mindset For Security

Parasoft Application Security Solution Improves Productivity



YOU CAN IMPROVE SECURITY without impeding your development productivity. How? Establish a continuous security process with Parasoft Application Security Solution.

Parasoft solutions establish a continuous process that identifies and remediates security vulnerabilities across every stage of the SDLC and ingrains security tasks into your team's workflow.

The Parasoft system automatically monitors whether your security policies are implemented in the code, applied at all layers of the application stack, operate correctly in the context of realistic scenarios, and persist as the application evolves.

It delivers a "jump start" solution for preventing the most likely application

security vulnerabilities and provides an automated system that applies state-of-the-art analyses throughout all stages of the SDLC, testing the application from the inside-out and outside-in to identify potential vulnerabilities.

No matter what your motivation, Parasoft's unique automated infrastructure drives your development process to ensure that it remains on track and does not disrupt the team's workflow.

Analysis capabilities include rule-based static analysis, peer code review process automation, data flow static analysis, penetration testing, runtime analysis/monitoring, and continuous regression testing.

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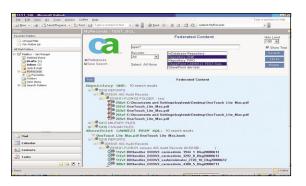
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Enhanced CA Records Management Solution

Helps Companies Streamline Records-Keeping Processes



CA Records Manager provides access to all content through a single interface

CA RECORDS Manager r12 is the latest version of the company's tool to help enterprises automate record-keeping processes. The program is designed to give users faster access to information, save time and money, and facilitate compliance with regulatory requirements and organizational policies. This new version delivers increased functionality with its records retention and disposition module, a localizable Web client, and added features to enhance the user experience.

CA Records Manager r12 is also certified by the United States DoD (Department of Defense) against the newly updated version 3 of the U.S. DoD 5015.2 standard, which provides for greater data security and integrity. Because of its long history of early and successful standards

adoption, CA was the first to certify against the new, more stringent standard.

AUGUST 8, 2008

"One of the most important new features in Records Manager r12 is the creation of an enhanced retention module that is an interface to perform all administrative tasks related to retention and disposition," says Reed Irvin, vice president of product management for CA. "Addi-

tionally, this release also delivers significant enhancements focused on creating transparency, declaring records more efficiently, improving the user experience, and applying policy on all content across the enterprise. For instance, new scripted email notification capabilities are designed to send an email notification to selected recipients when your specific defined criteria are not met within a specified time frame."

CA Records Manager r12

Records management solution designed to help enterprises improve efficiency, automate processes and reduce risk

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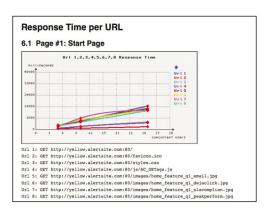


NETWORKING & VPN

August 8, 2008

On-Demand Load Testing

AlertSite Provides SaaS Testing To Improve Web Site Stability Before Launch



WEB SITES ARE launched every day, but it's likely many have little or no idea if the site will be able to handle the loads it will encounter. The result is many Web sites experiencing errors that could have been avoided with some robust load testing.

AlertSite addresses this need with the release of On-Demand Load Testing, a SaaS (software as a service) application that is designed to offer businesses quick, simple, and intuitive load testing that simulates actual user loads. On-Demand Load Testing is designed to help companies identify scalability issues, bolster the infrastructure, and prevent site crashes so customers never experience downtime.

By leveraging AlertSite's DéjàClick technology, which simplifies the testing, design, and setup processes, virtually any user can build and deploy a load test easily and review the results quickly. Users can log on from anywhere in the world and quickly test. There is no need for learning a scripting language or acquiring special equipment software or extra personnel, which saves companies money.

On-Demand Load Testing works by simulating Web traffic from thousands of simultaneous users. Once the test is complete, the results are instantly generated into an ondemand report that shows a break-

down of Web site performance over time. Users can test URLs at any time, indicate the number of concurrent virtual site visitors, and even specify the time of day when automatic testing is performed. Users can reuse the scripts that are created from this process at any time and as often as needed.

AlertSite On-Demand Load Testing

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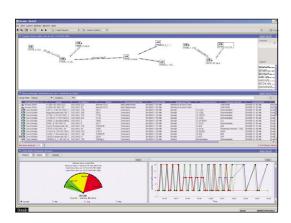
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NETWORKING & VPN

August 8, 2008

Manage IT Convergence

Find, Configure & Monitor Your IT Assets & Services With Dorado Software Redcell OpsCenter



Redcell OpsCenter provides one console for automatically finding networked assets and understanding how they're interconnected.

A KEY PROBLEM FACING IT professionals is managing and monitoring their collection of resources with multiple vendor-specific and disparate tools, which keeps IT operational costs high and the ability to automate tasks impossible. To prevent business growth from devolving into IT chaos, administrators need a single, consolidated system they can trust.

Dorado Software Redcell OpsCenter is an all-in-one management system designed to consolidate IT resource management of multivendor, multitechnology networked environments.

From one console, Redcell OpsCenter finds all networked assets and subcomponents; understands how they are interconnected and associated; performs heteroge-

neous device configuration; and monitors the health, availability, and performance of your networked application infrastructure.

Redcell OpsCenter increases efficiency and productivity while reducing administration costs through the automation of key operational tasks and intelligent monitoring of services and devices—in a traditional and virtualized multidomain environment that includes routers, switches, wireless gear, security appliances, servers, PCs, storage devices, and networked printers.

OpsCenter provides functions such as automated device, link, and service discovery; CMDB inventory; health and performance monitoring; free-form configuration task execution; and reporting.

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NEWS



IBM To Purchase Ilog

FOR ABOUT \$340 million (or about 215 million euros), IBM plans to buy Ilog, a French software firm. So far, Ilog's board of directors has already approved the acquisition, and some of its shareholders those who hold about 10% of the total shares—have also accepted the offer. It still awaits U.S. and French regulatory approval and acceptance from holders of two-thirds of the shares. Once the acquisition is complete, IBM plans to integrate Ilog's business rules management systems into its own business optimization tools and business process management to enhance and add capabilities to IBM's product lines.

Study Shows Cuts In Jobs, **Project Spending**

More companies expect to cut IT jobs related to application development and maintenance, with contract or third-party employees expected to take the brunt of the cuts, according to a study by Goldman Sachs. The survey, which covered 100 managers, primarily CIOs, at Fortune 1,000 companies, shows that about 11% of those surveyed expect to cut in-house programming employees, 48% expect to drop at least some contract employees, 30% say onsite third-party staff will be cut, and 12% will cut offshore employees. In a separate study, Goldman Sachs found that many CIOs—47%— expect to cut spending on PCs, servers, and storage in 2009.

Forrester Releases OS, **Browser Numbers**

FORRESTER RESEARCH'S latest study of 50,000 enterprise users from 2,300 companies found that more than 87% are still running Windows XP. About 8.8% are using the Vista operating system, 4.5% use Mac, and 0.5% use Linux. Use of Microsoft's Internet Explorer has dropped slightly since January; 77.6% of those surveyed in June use IE, compared to 79.1% in January. Firefox's use has grown from 16.8% to 19.4% during the same time period. Forrester's "Enterprise Browser and Desktop Trends" study also found that most users—34.1%—have monitors between 15 and 17 inches in size. About 25% have monitors between 17 and 19 inches.

Verizon Posts Quarterly Gains

FOR ITS SECOND QUARTER, Verizon Communications recorded increased profit, thanks in large part to solid wireless sales. Quarterly earnings totaled \$1.88 billion, or 66 cents per share, up from \$1.68 billion, or 58 cents per share, last year. Q2 revenue was \$24.12 billion, up year over year from \$23.27 billion. Although more customers are disconnecting their traditional phone services, Verizon Wireless added 1.5 million subscribers this quarter, so its total customer base now numbers 68.7 million. Verizon also saw growth in its FiOS highspeed Internet and video service, with 176,000 new FiOS TV customers and 187,000 new FiOS Internet customers.

Microsoft Splits Platforms & Services Division

FOLLOWING THE departure of Kevin Johnson, Microsoft's president of its Platforms & Services Division, the software giant says it plans to divide the unit into two groups. One of the units will be called Online Services, and Microsoft will look for a new candidate to be the senior vice president to head up the group. The other unit will be known as Windows/ Windows Live, and Microsoft's senior vice presidents Jon DeVaan, Steven Sinofsky, and Bill Veghte will be responsible for it. Both of the groups will report directly to Steve Ballmer, Microsoft's chief executive

Alcatel-Lucent Revenue Drops; CEO, Chairman Resign

PARIS-BASED Alcatel-Lucent announced its second-quarter revenue was down 5.2%, and its net loss doubled from a year ago. The company also announced that both its chairman and CEO will resign as a result of the two companies' completed merger. Chairman Serge Tchuruk will step down October 1; CEO Pat Russo will step down before the end of the year, pending the company's board of directors finding and installing a new CEO. As part of the postmerger restructuring, the company also plans to reduce the size of its board of directors. Henry Schacht, former CEO of Lucent Technologies, resigned from the board.

Motorola To Buy AirDefense

IN A MOVE THAT will add a new layer of security to its WLAN product portfolio, Motorola announced plans to purchase AirDefense, a wireless LAN security vendor. AirDefense makes software applications that let companies protect their networks from wireless security threats and meet regulatory compliance standards; it also produces wireless intrusion prevention solutions. The acquisition fits with Motorola's recent move to promote the concept of an all-wireless enterprise that does not

This information provides a quick glimpse of current and historical stock prices and trends for 14 major companies in the technology market.

Company	Symbol	Year Ago	July 25 \$	August 1 \$	% change from previous week
Computer Associates	CA	\$25.14	\$23.41	\$22.29	▼ 4.78%
Cisco Systems	CSCO	\$29.78	\$22.43	\$21.99	▼ 1.96%
Dell	DELL	\$27.76	\$23.47	\$24.41	4.01%
Electronic Data Systems	EDS	\$26.27	\$24.85	\$24.82	▼ 0.12%
Google	GOOG	\$512.94	\$491.98	\$467.86	▼ 4.9%
HP	HPQ	\$46.73	\$43.71	\$43.96	▲ 0.57%
IBM	IBM	\$112.13	\$128.53	\$126.64	▼ 1.47%
Intel	INTC	\$23.80	\$22.01	\$22.35	▲ 1.54%
McAfee	MFE	\$35.85	\$32.89	\$37.13	▲ 12.89%
Microsoft	MSFT	\$29.29	\$26.16	\$25.44	▼ 2.75%
Oracle	ORCL	\$19.79	\$20.95	\$21.50	▲ 2.63%
Red Hat Software	RHT	\$20.79	\$21.06	\$21.23	▲ 0.81%
Sun Microsystems	JAVA	\$5.10	\$10.43	\$9.32	▼ 10.64%
Symantec	SYMC	\$19.04	\$19.45	\$21.70	▲ 11.57%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions

need a wired network. The deal is slated to close in the next few months, but the companies have not disclosed the financial

Analysts: Mini-Laptops Set For Big Growth

SHIPMENTS OF mini-laptops, also referred to as netbooks, are expected to reach more than 8 million this year, according to the Market Intelligence Center, which is based in Taiwan. Netbooks are classified as a type of mobile PC that weighs less than 2.2 pounds and has at least a 7-inch LCD. The category of PCs is relatively new, with several companies, including Asustek, Acer, and HP, recently releasing products and others, such as Dell, announcing plans for netbooks. Market Intelligence Center expects more than 18 million of the units to ship next year.

■ RFID Chipmaker Loses Lawsuit

NXP SEMICONDUCTORS has lost its case against Dutch university Radboud University Nijmegen. The chipmaker filed suit against the university in order to prevent it from releasing its findings on security flaws that affected some 2 billion smart cards manufactured by NXP. Though the university claims to have given NXP plenty of warning ahead of time to resolve issues before releasing its study, NXP believes that "it is not conceivable that they all will have their security upgraded to the necessary level in a period of month until this paper is published; these upgrades will take up to a number of years."

San Francisco DA **Discloses City Passwords**

As PART OF the case against Terry Childs, engineer principal at the Department of Telecommunications and Information Services in San Francisco, District Attorney Kamala Harris' office has disclosed about 150 usernames and passwords used by various departments within the city to access its VPN. The passwords were filed as Exhibit A in a court document aimed at preventing a bail reduction for Childs, who is being held on charges of computer tampering. In order to reset the passwords, the city will likely have to reconfigure the VPN software on each computer that has access to the VPN.

Former Google Employees Launch Rival Search Engine

ANNA PATTERSON AND Russell Power, two former Google employees, and Patterson's husband, Tom Costello, have launched Cuil (pronounced "cool"), a new search engine its creators hope will rival that of Google. According to the company, Cuil has indexed 120 billion Web pages and has set its sights on out-indexing Google; the search giant recently announced that it had discovered 1 trillion unique Web pages, though it did not release estimates of how many of those pages it had indexed. Cuil's search engine differentiates itself by using nontraditional search approaches, result categories, and tabs, as well as search suggestions.

Motorola Posts Small Profit, Maintains No. 3 Spot

AFTER SELLING more mobile phones than expected, Motorola claimed a small quarterly profit and held on to its No. 3 ranking in the global mobile phone market, ahead of rival LG. The company's second-quarter \$8.1 billion revenue and 28.1 million phones shipped beat analysts' predictions of \$7.7 billion and 26.6 million, respectively. On a per-share basis, Motorola broke even in the second quarter and posted a \$4 million profit, improving on its loss of \$28 million, or 1 cent per share, in Q2 last year.

Upcoming IT Events

- AUGUST -

SHARE

August 10-15 San Jose, Calif. www.share.org

. AFCOM Greater Kansas City

August 12

Cerner Corp. 3200 N. Rockcreek Parkway

Kansas City, Mo. www.greaterkc-afcom.com

AFCOM St. Louis Gateway

August 12

Maritz 1365 North Highway Drive

Fenton, Mo. www.afcom.com/afcomnew

/stlouis.html

. AITP Nashville

August 14, 5:30 p.m. Holiday Inn-Brentwood 760 Old Hickory Road Brentwood, Tenn. www.aitpnashville.org

AITP Washington, D.C.

August 14, 6:30 p.m. Alfio's Restaurant 4515 Willard Ave Chevy Chase, Md. aitpwashdc.ning.com

ISSA Upstate SC

August 15, 11 a.m. Landmark Building Downtown 301 North Main Street Greenville, S.C. www.upstate-issa.org

. Intel Developer Forum

August 19-21 San Francisco, Calif. www.intel.com/idf

ISSA Forth Worth

August 20, 11:30 a.m. The City of Fort Worth Building 275 W. 13th Street Fort Worth, Texas www.issa-cowtown.org

. AITP SC

August 21, 5:15 p.m. Outback Steakhouse 7643 Rivers Avenue North Charleston, S.C. www.aitp-charleston.org

. **ISSA Puget Sound**

August 21, 5:30 p.m. Olympic Room, Microsoft Main Campus **Building 27** 3009 157th Place NE

Redmond, Wash. www.issa-ps.org

. AITP Tarheel

August 21, 6 p.m. Foothill Brewery 638 West 4th Street Winston-Salem, N.C. www.aitp.org

ISSA Baltimore

August 27, 4:30 p.m. Sparta Inc. 7110 Samuel Morse Drive, Suite 200 Columbia, Md. www.issa-balt.org

- SEPTEMBER -

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PRODUCTS AT WORK

A Texas-Sized Wireless Deployment

Aruba Networks Makes Wi-Fi Available At Large School District

by Sandra Kay Miller

TEXAS HAS A reputation for doing things big, and the wireless installation for Northside Independent School District in San Antonio is no exception. As the fourth largest school district in Texas, it is composed of 100 campuses spread out over 350 square miles with 87,000 students. Add to that a growth rate of 3,000 to 4,000 new students and as many as five new schools each year, coupled with new mandates by the state of Texas for online testing, and it's easy to see why the district has been heavily investing in technology.

"We're a very fast-growing district, so we're in the mode of building. We passed a bond for \$700 million, and about \$20 million of that was toward technology. The funding for our current wireless implementation was from a previous bond of \$6 million," says Ernest Vasquez, the assistant director of technology services for the district.

The Wireless Project

With increasing requests for wireless connectivity, Vasquez wanted a product that could leverage the Gigabit metropolitan-area network to each campus. "We have great connectivity on the wired side, but on the wireless side, we had just a smattering of fat APs out there," he says. The previous wireless network also lacked centralized management or reporting. "It was very hard to manage. If something went wrong, we had to go out to the school to look at it," he adds.

While the district's focus is on student achievement, other drivers for the wireless project included teacher and staff productivity. The scope of the implementation would include approximately 5,000 access points installed throughout the entire district, managed by a single full-time employee. "I have a limited staff of six individuals that make up the network team. Out of those six, one is my wireless guy," says Vasquez.

With a shortlist in hand after extensive due diligence, Northside invited the wireless market leaders to come in to the district and perform small pilot projects on a couple of campuses.

"We did our due diligence and looked at the market leaders and invited them to come in, give us a demonstration, and do a small pilot at a couple of campuses. With Aruba, they impressed us right away—it was easy to set up, it was straightforward, and we really liked the centralized management it offered. The other vendors just weren't there yet when we started this a couple years ago," Vasquez says.

As a large organization, the school district has had lots of experience with large



IT vendors. "To be honest, I'd never heard of Aruba Networks before my wireless guy brought it to me," notes Vasquez.

When Northside began speaking to Aruba Networks (www.arubanetworks .com) about a wireless installation that would cover the entire district and offer centralized management and security, Vasquez found the flexibility Aruba offered very appealing. For example, when additional product was needed during the deployment, Aruba expedited hardware and worried about the paperwork later. "The big vendors don't do that," he says. "They generally need a P.O. before they'll ship any product. But Aruba was right on the spot with what we needed, and we didn't have to wait three or four weeks while we got a purchase order to them and went through the whole bureaucratic process."

Due to this level of flexibility and service, Northside is currently ahead of its deployment schedule. "So far, we have about 3,500 APs deployed and expect to complete the project in the next three to four months. It's exceeded our expectations as far as implementation because we had an 18-month schedule, and it looks like we're going to get it done in about 13 months," says Vasquez.

Moving Ahead

Once the decision was made to go with Aruba Networks, Vasquez built a team that included facilities, who handled the cabling, and his staff for infrastructure, system administration, and networking. Together, they built a logistical plan that included a time frame, a rollout map for the district, and security.

The first pilot took place at a magnet high school with approximately 700 laptops. "We put about 65 APs at that school and configured it using 802.11a because we wanted a dense deployment," says Vasquez. After several months, there were no infrastructure failures, and wireless users reported excellent connectivity, even when walking outside, in courtyards, and in the cafeteria. "After that pilot, we felt comfort-

able with Aruba and started a rollout schedule to the different types of campuses," he adds.

Further aiding the project, Northside chose to use a third-party Aruba partner to install the access points within the campuses. After the access points

were snapped in place and provisioned, Vasquez's team members then configured the controllers themselves. Similarly, the SSIDs (service set identifiers) pushed out to the new APs were identical to the ones the fat AP used, so the switch was transparent to the end user. "All they had to do is fire up their laptop, and the SSID they had set previously worked," says Vasquez, who adds that the district has yet to hit any major snags with the rollout plan.

The seamless connectivity has been a boon to district employees, such as administrators, psychologists, and, of course, IT staff, who travel extensively throughout the district. "Before the Aruba deployment, they were always having to find a desk and plug in. They don't have to do that anymore. Having this seamless connectivity has just worked beautifully for us," says Vasquez. "I'm one of them. I travel a lot throughout the district and take my laptop everywhere. It doesn't matter where I'm at; I open my laptop, and I'm on the network."

The newer, more robust wireless network has also facilitated network and telephone access in temporary classrooms that the district has had to install due to the explosive growth. Currently, there are 11,000 VoIP devices deployed within the district. To ensure quality of service, Vasquez has separated voice and data onto different networks.

Hindsight & Looking Ahead

Given his experience thus far, the only regret Vasquez has is an overzealous AP deployment. "I think we were guilty of overkill in the beginning because we wanted to make sure we had sufficient coverage," says Vasquez. "I wouldn't put in as many APs if I had to do it again."

In the initial stages of the project, Northside attempted to benchmark with other schools, but there just weren't any other K through 12 districts with a similarsized installation. What districts it examined had limited coverage, so in the effort to provide comprehensive connectivity, Northside opted for a dense AP deployment. "When we look at the statistics of our controllers, I could probably take half of the APs out and still have great connectivity with the same number of students," says Vasquez. He adds he would also cut back on the number of antennas on the exterior of schools. "It really wasn't necessary, but we were trying to cover all our bases."

Vasquez and his team are planning for the future. Already, they are testing the integration of PDAs and Web-enabled mobile phones with district-wide applications such as Web mail. Support for 802.11n has been built into the infrastructure so when the standard is ratified and hardware becomes more affordable, Northside will have the capability to take advantage of increased bandwidth.

With only 30 schools remaining, Northside expects to complete its rollout of Aruba Networks in the next three to four monthswell ahead of schedule. The word coming in to date has been nothing but positive.

Vasquez says, "Hopefully, this will help other school districts as large as us. We're more than happy to assist them or tell them how we did it."

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"With Aruba, they impressed us right away; it was easy to set up, it was straightforward, and we really liked the centralized management it offered. The other vendors just weren't there yet when we started this a couple years ago," says Ernest Vasquez, assistant director of technology services for Northside Independent School District in San Antonio, Texas.

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STORAGE

STORAGE August 1, 2008

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August 1, 2008

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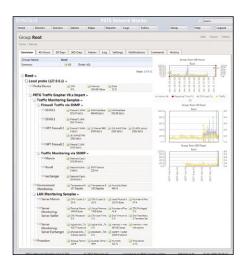


NETWORKING & VPN

August 1, 2008

Cost-Effective Network Monitoring

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Paessler's PRTG Network Monitor V7 offers an easy-to-use interface for more streamlined management.

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JULY 25, 2008 PHYSICAL INFRASTRUCTURE

KoldLok Mini Keeps Air Where It Belongs

New Upsite Raised Floor Grommet Ideal For Small Cable Openings

HAVE A SMALL CABLE opening you need to seal in your raised floor? The KoldLok Mini Raised Floor Grommet from Upsite Technologies can improve your data center cooling. KoldLok Mini has virtually all of the engineering of original KoldLok products designed to reduce bypass airflow.

New KoldLok Mini features and benefits include a UL94 V0-standards fire-rating and KoldLok engineering at a competitive price. As with the original KoldLok products, the KoldLok Mini optimizes the effectiveness of existing cooling equipment and manages heat loads to ensure site uptime

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SECURITY **JULY 25, 2008**

Aggressive Non-Delivery Report Spam Combat

SonicWALL's Email Security 6.2 Offers Complete Inbound & Outbound Email Protection

SPAM IS THE enemy of every network administrator; it clogs inboxes, creates unnecessary traffic, and can deliver malware. Although measures at the client level can combat these dangers, preventing spam from reaching desktops is a powerful way to keep your network secure.



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the BATV function is activated, it combats NDR (Non-Delivery Report) spam by discerning a legitimate NDR message from an NDR spam message and dropping the connection from the spam's server.

When an outgoing message is sent, it is tagged with a private key; when NDR messages are received, the tag is checked for validity. As SonicWALL processes both in- and outbound traffic, this tag checking can be done seamlessly for both the customer and end users.

Other features of Email Security 6.2 include enhanced language capabilities, including Dutch, French, and Swedish; improved visual representation of performance metrics for easier monitoring by administrators; and simplified licensing, so

a user can choose the SonicWALL Email Security appliance or software system that best fits an organization's needs. For example, subscription services can be purchased in user packs of 25, 50, 100, 250, 500, 750, 1,000, 2,000, 5,000, or more as needed.

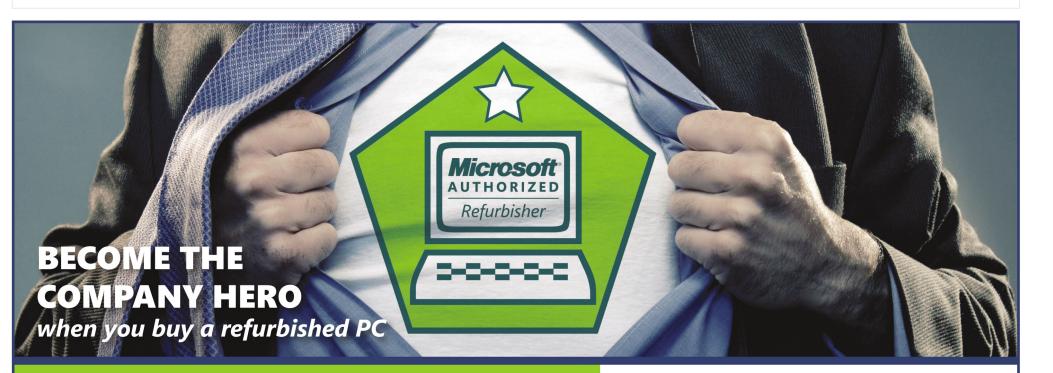
SonicWALL Email Security 6.2

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Green Data Destruction

D3's New D3eraSE Service



DATA DESTRUCTION and green recycling efforts are often at odds with one another. Now, thanks to the new D3eraSE service from D3 (Digital Data Destruction Services), IT managers have another option for securely destroying data without permanently destroying the media on which it is stored.

D3eraSE is a Tier 4 electronic data destruction process that permanently removes all data stored on a hard drive or flash media in such a way that data recovery is impossible, yet the media is reusable. Because the D3eraSE service is more secure than simply overwriting the data, the NIST (National Institutes of Standards and Technology) classifies D3eraSE as acceptable for confidential documents. D3eraSE has also been accepted by the Department of Defense

for use with media containing data that's labeled as secret information.

In contrast with Tier 3 destruction or Department of Defense Directive 5220.22 triple-pass overwriting, which leaves the opportunity for up to 10% of the data to be forensically recovered, the D3eraSE Tier 4 service eliminates the possibility of forensic recovery.

D3eraSE's Tier 4 services provide a less extreme alternative to Tier 5 data destruction services that completely disassemble, degauss, and recycle hard drives. Plus, because media is still usable after using the D3eraSE Tier 4 service, customers can save thousands of dollars by reusing their existing stock of hard drives and flash media.

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Easy-to-understand reports help administrators track events.

AS THE NEED FOR available data increases, budgetary and staff costs can prohibit some SMEs from acquiring or effectively managing backup and recovery products. They need backup and recovery apps that are easy and quick to install, are simple to manage, and have all the functionality an enterprise needs, all at a low cost. Amanda Enterprise is Zmanda's effort to provide a solution to this problem.

Amanda Enterprise 2.6.4 is the latest iteration of the software, an open-source product that uses only standard formats and tools instead of proprietary products. Backups can be made to a single Linux or Solaris master backup system from multiple systems. Supported platforms include Windows, Linux, Solaris, and Mac OS X.

Other new features of Amanda Enterprise include online backup support for Microsoft SQL Server, Microsoft Exchange, and Oracle databases and protection for Windows Active Directory. The software can restore a variety of hardware and virtual environments and uses Microsoft's Volume Shadow Copy Service to ensure reliability during hot backups so data access won't be impacted.

JULY 25, 2008

Amanda Enterprise supports a variety of backup media and methods. Data and archives can be stored on disks, tape, optical devices, or online storage services. The Department of Homeland Security has certified it is free of security defects.

Zmanda Amanda Enterprise 2.6.4

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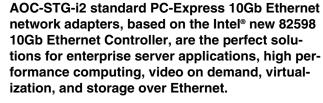


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AOC-UTG-i2	Intel 82598	UIO Full Height	PCI-e x8	2	CX4	\$335.00
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SECURITY JULY 25, 2008

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Intellitactics Security Manager can provide reports to validate compliance with regulatory standards, internal policies, and industry best practices.

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Intellitactics' AIR (Active Integration and Response) program provides for the expansion of the security ecosystem through integration with leading-edge security products that leverage Intellitactics Security Manager's analysis of data sources. Security Manager's analytical engine generates notifications of threats. The

integration of Security Manager with complementary security technologies provides the security team with a more complete picture and helps to better protect the enterprise and comply with regulatory standards by simplifying the ability to monitor, analyze, take action, and report on security-related events.

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Measure Your Power Usage

How Do You Get An Accurate Assessment?

by Elizabeth Millard

ALTHOUGH DATA CENTER experts urge IT managers to maintain constant control over power and cooling, which are interrelated because one depends on the other, it can be tricky to accurately measure power consumption in a data center.

Any one-time measurement is just a snapshot of a data center's energy use, notes Greg Smith, business development manager of Electrical Reliability Services for Emerson Network Power's Liebert Services (www.liebert.com). "Actual energy consumption fluctuates depending on the tasks being performed at [any] given time throughout the day and depends largely on human activity," he says.

Instead of trying to measure on a daily basis, it may be more productive to measure facility power and data center power periodically, notes Wally Phelps, data center product manager at DegreeC (www .degreec.com). During that measurement period, an SME should take readings several times during the day for several consecutive weeks, he says, which should give a data center manager an idea of consumption. But adding measurement time to the schedule, it turns out, is the easy part.

In general, to get consumption data that's useful, IT will have to go down to the equipment or device level, says Steve Yellen, vice president of product and market strategy at

Aperture (www.aperture.com). "There can be a big difference between the manufacturer's rating of a particular device and the actual power it will consume," he notes. "In the past, data centers have relied on the man-

ufacturer's ratings, but as data centers try to squeeze out more processing capacity from their limited physical resources, they're increasingly looking to use actual measurement."

There's no shortcut or rule of thumb, Yellen says, just a strategy of monitoring devices to see how much they're consuming and track it over time to identify trends.

To do the work, it's time for meters. The main meters the power company uses might do a fine job of measuring overall electricity consumption for a building, but data center managers will need submeters. Companies can sometimes borrow submeters from the local electric company, but most often the company must purchase them, Phelps adds.

To make the measurement with the least effort, identify the data center and cooling infrastructure circuits as close to the main feed as possible, Phelps says. In the ideal case, an SME would only need one measurement point, but in many cases, data center circuits will be on different branches or feeds, and the SME will have to use them separately.

Phelps notes that a company can use a single meter and move it to different circuits, but this will be less accurate, especially in climates that change often.

Also important is that power that the cooling infrastructure consumes must be measured exclusive of other building systems. Many data centers have subsystems, and Phelps notes that SMEs should take care in identifying and measuring consumptions of all subsystems. For example, a chilled water system will require measurement of condenser pumps, cooling loop

that a company should make sure that only devices being used are drawing energy because "ghost servers" could have been decommissioned but may still be plugged in. Secondly, an SME should examine the efficiency of converting energy into informa-

tion processing. This is the trickier part of the equation, Yellen believes, because it goes to the level of how efficiently the enterprise is using computing resources. He says, "This is the area where server utilization and virtualization and the efficiency of the software in using the processor come into play."

Potential Pitfalls

One challenge that could crop up during

the measurement is a lack of funding for extensive submetering, particularly if there are numerous pieces of equipment that require the strategy. DegreeC's Phelps notes that some meters can cost about \$1,000 each, so having to assess several locations can be costly.

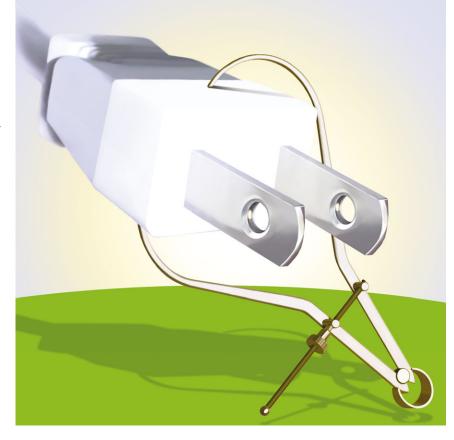
For those situations, Smith believes a thorough electrical assessment performed as part of an overall data center assessment is the most cost-effective way to get a basic understanding of energy consumption, even if it doesn't go into the type of deeper detail submetering provides. "This type of assessment will include measurement of the load per UPS unit," Smith says. "These measurements of IT energy consumption, when repeated at various peak and non-

peak times and considered in conjunction with overall facility power use, can provide some context for understanding actual data center energy consumption."

Another challenge may be hybrid systems. Although most data centers consume only electricity, some do use other forms of energy, such as natural gas, diesel, and even steam, says Phelps. Because an SME must measure all energy for an accurate reading, submeters can capture data and an IT manager should convert the energy units to BTUs.

For example, diesel is measured in gallons, while natural gas is measured in therms, so both would have to be converted to BTUs, much as kilowatts will have to be, to use a standard measure.

Finally, seasonal variation can play a large part in cooling demands and efficiency. In general, Phelps notes, data centers will be more efficient in winter months than in summer, and SMEs should consider that spike in demand when making any decisions on tweaking procedures and equipment after the consumption data is collected. $\ \square$



pumps, the chilled water distribution pump, chillers, and cooling tower fans.

Usage & Efficiency

To understand what the numbers mean, Yellen suggests comparing a data center's energy usage to others within the industry. This information should be easier to obtain soon, he says, because the EPA is forming a comprehensive database of metrics.

In the meantime, companies may want to look at finding ways to calculate efficiency, which Yellen says is very tricky to measure, especially in complex and changeable environments such as data centers. There are two components to calculating efficiency, he notes. First, determine how efficiently the data center is bringing power to IT equipment such as power distribution and cooling by comparing numbers with manufacturer specs and others in the industry.

"If it isn't efficient, then a right-sizing exercise may be required to ensure that your infrastructure and design and sizing are as efficient as possible," Yellen says. He adds

STORAGE **JULY 25, 2008**

According to Greg Smith, business develop-

What Do You Do With The Data?

ment manager of Electrical Reliability Services for Emerson Network Power's Liebert Services (www.liebert.com), the first thing to do is look for inefficiencies. Reductions in energy consumption at the IT equipment level have the greatest impact on consumption throughout the organization because there's a cascade effect across all supporting systems.

Then, look sequentially at opportunities for improvement, Smith says, starting with higherefficiency servers and moving through the data center to look at inefficiencies in power conversion and opportunities for improvements in cooling strategies. He says, "Even slight improvements in one area can lead to significant efficiencies down the power stream." Emerson has published a whitepaper online with specific strategies that may be helpful. It's available at www.emersonnetworkpower.com/energylogic.

With accurate energy usage data, IT can also start charging business departments for the energy costs of "their" devices, adds Yellen. He says, "If you give them the responsibility for and opportunity to save money by being more selective in the power they request, they'll start to do that."

Serious Storage

Mercury Rack Pro Offers Easy Integration, High Performance

WHEN YOU NEED data storage with maximum reliability, quality, and performance, Mercury Rack Pro solutions from OWC (Other World Computing) will exceed your needs. OWC has been providing quality hardware products and support since 1988, and the Mercury Rack Pro is no exception. It's available in sizes up to 4TB with drives that are striped (RAID 0), striped and mirrored (RAID 0+1), or JBOD (Just a Bunch of Drives). With a variety of models featur-



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The Push To Monitor Power

Continued from Page 1

centers have a more urgent need to monitor power use, but experts contend that the practice is necessary even for small and midsized enterprises. In fact, power monitoring could prove even more valuable for SMEs.

"The cost of energy can impact the small and midsize corporations even more than the large enterprises," says Gisa Abiog, director of sales and marketing for Cyber Switching (408/436-9830; www.cyber switching.com). "Many utilities are offering rebates, but SMEs may not qualify because of the requirement that needs to be met to receive those rebates, and the smaller companies may simply not have the bandwidth to capitalize on such rebates."

In a recent study that surveyed more than 1,100 IT executives at SMEs, IBM found that most SMEs say energy is their largest cost increase over the past two years, while more than one in three businesses say they believe IT accounts for 10 to 50% of their total energy costs. Further, more than 65% of businesses in most industries say energy efficiency is a key criterion when considering new IT investments.

"All data centers, for large or small enterprises, need to take proactive steps in reducing the energy consumption in their data centers. Efforts to reduce energy usage will depend on power monitoring in order to set a benchmark. Energy efficiency is an environmental and economic imperative that can no longer be ignored," says Vinnie

Jain, advanced marketing manager for Ortronics (www.ortronics.com).

Also driving the push in the IT industry to monitor power is the increasingly popular practice by companies to bill power usage back to the business units or departments that are consuming it, Abiog says. "This system of 'billing' brings the power problem to the attention of the user. The 'owner' of the equipment is much more likely to look for efficiencies, as well, since the cost of ownership comes out of his or her budget," she notes.

Although there are reasons for addressing power use, not all companies are willing to put forth a concerted effort. Rackspace's (www.rackspace.com) second annual survey in its Greenspace Initiative found that only 28% of surveyed companies were willing to sacrifice 10% of server performance for lower carbon emissions—far less than the 51% who said they would sacrifice the same last year. 63% of respondents said they wouldn't sacrifice any performance for green efforts, up 22% from last year. However, 69% of surveyed companies said they are concerned about power efficiency and its impact on the environment and are seeking ways to address (or are already addressing) power efficiency within their companies.

Power In Monitoring

At its core, power monitoring can help organizations establish a set of metrics that can help identify potential deficiencies and other problematic areas. According to Ryan Murphey, director of data center operations at PEER 1 (www.peer1.com), it's essential to gain visibility into areas where power is being used so data center managers can make appropriate modifications and/or upgrades to existing infrastructure. In turn, these measures can increase efficiency and recover some wasted power.

"[Power monitoring] allows you to establish a history of usage to better forecast future demand and availability to your organization," Murphey says. "Only when you have collected the data will you be able to make informed decisions to where to deploy capital expenditures with valuable future benefits in order to save on ongoing operational expenditures."

Because power impacts nearly every data center element, determining where to focus efforts can be a challenge, but some basics do apply. Ortronics' Jain says that SMEs should measure incoming power to the data center in comparison to the overall facility power to measure DCIE (data center infrastructure efficiency), a metric members of The Green Grid (www.thegreengrid.org) developed. Jain adds that SMEs should also measure power at the rack and row levels to rebalance the load, if necessary, and that the rack measurements will help to manage data center hot spots.

"[The Green Grid is] working to establish common metrics for determining whether or not your facility is green," Murphey says. "Without some kind of baseline power metrics, you have no way of knowing where and how you can best monitor and save power [and pass] on efficiencies to customers."

Look Before Leaping

Although the pressure to reduce power consumption in data centers is reaching a fevered pitch, careful data center managers will want to fully evaluate their power environment before making full-fledged efforts to address potential problems. Peter Dougherty, president and CEO of OnPATH Technologies (www.onpathtech.com), suggests that managers ask themselves the following questions to help make power-related decisions:

- What is the power consumption of our data center facility's major components?
- Are we investigating whether energy usage inefficiencies exist in our data center, and are we looking for help to identify and eliminate them to save costs?
- Do we have difficulty bringing new applications and service online because of insufficient data center power or cooling capabilities?
- Is our facility currently able to support continuous operations for higher-speed networks and higher-density computing?
- Are we facing compliance issues on energyrelated regulations?

Unraveling Windows 7

Continued from Page 1

not a good thing to do because the story is going to change long before we see even the first beta."

Following a six-year lag between WinXP and Vista, Microsoft has targeted a three-year development timeline for Windows 7. Based on Vista's launch—November 2006 for enterprise customers and January 2007 for consumers—this could mean late 2009 or early 2010 availability for Windows 7. Many analysts agreed a launch sometime during the first half of 2010 was more realistic.

Vista, Improved

Early screen shots leaked to the Internet and a demo at this year's D6 conference point to some minor functionality tweaks to the existing Vista interface. Architecturally,

Windows 7: What We Know

Microsoft isn't confirming anything yet, but various leaders—including CEO Steve Ballmer and just-retired Bill Gates—have hinted at some of the following improvements:

- More robust security. New compliance and data protection and management tools will likely address some of the usability criticisms levelled at Vista.
- Improved connectivity. Better syncing and management of multiple devices will ease mobile deployments for IT. Improved performance through device-specific optimization may also be part of the mix.
- Better search. Windows 7 will more seamlessly integrate local, network, and Internetbased search.
- Reduced TCO. Streamlined OS and application installation, migration, and patching will limit IT management workload and reduce support requirements. Extended virtualization capabilities will further minimize administrative overhead.

Microsoft confirms that Windows 7 will be available in both 32- and 64-bit versions. It will be built on the same kernel as Windows Vista and will leverage the same driver libraries, as well. Stung by incompatibilities and hardware and application integration challenges that shadowed Vista's release, Microsoft is being especially careful to reassure IT decision makers that compatibility issues will be far less pervasive this time out.

Although Vista has already sold more than 150 million copies worldwide and is now preloaded on the majority of computers sold at retail, corporate adoption has been challenged by the more complex migration path into IT.

Relative to earlier major OS releases, enterprise adoption is slower, and some companies are even considering bypassing Vista entirely. Responding to the cooler-than-anticipated reception from corporate customers, Microsoft last year extended its support for Windows XP, and many hardware vendors introduced WinXP downgrade options for new hardware. Although these alternatives are dying off as Microsoft ends WinXP support once and for all, a number of organizations still plan to stick with WinXP for as long as possible—even if it means increased support costs and risks after WinXP reaches end-of-life.

Gartner says IT, like Microsoft, should once again look at Vista rather than holding its breath for Windows 7.

Windows Retirement Dates

As new versions of Windows come out, it can be hard to keep track of which version is headed out to pasture. Here is a roundup of expected retirement dates of Windows iterations and service packs past and present.

Operating System Version	Mainstream Support Retirement	Extended Support Retirement
2000 Professional	June 30, 2005 (Retired)	July 13, 2010
XP Professional	April 14, 2009	April 8, 2014
XP Professional 64-bit	April 14, 2009	April 8, 2014
Vista Business & Enterprise editions	April 10, 2012	April 11, 2017

Windows Service Pack Retirement Dates

Service Pack	Retirement Date
XP SP1	October 10, 2006
XP SP2	July 13, 2010
XP SP3	TBD*
Vista SP1	TBD*

Source: Microsoft Support Lifecycle

* Per Microsoft, the service pack becomes unsupported either when the product's support life cycle ends or two years after the next service pack is released, whichever comes first.

another case where it seems like it's rushed out an operating system before either the product itself or the ecosystem that surrounds it is ready for prime time," he says. "Windows is a complex animal, so it's not

Microsoft is being careful to reassure IT decision makers that compatibility issues will be far less pervasive this time out.

"What Microsoft needs to do is figure out how to get away from the bad press of Vista," says Michael Silver, research VP at Gartner. "Vista the product is a whole lot better than the press would have you believe."

Silver also cautioned Microsoft against moving too quickly. "Microsoft can't risk

surprising that it takes three years to gear up for this kind of release."

The WinXP Time Bomb

For companies still deciding between proceeding with a Vista migration or skipping it and waiting for Windows 7, Silver advises against holding on to WinXP for too long.

"We think that for most organizations today that don't have really effective ways to do zero-touch, low-cost upgrades, the best way to upgrade an operating system is to tie it to the hardware," he says. "Bring in the new operating system with the new hardware and don't touch existing hardware midlife."

"Homogeneity with respect to the client operating system is overrated," says Silver. "You won't have identical machines for everyone because you buy them over three to four years. You're best off saying that the OS goes with the hardware, and you get a new OS when you get new hardware."

Silver says homogeneity has little to do with hardware, anyway. "It really comes at the application level, where you ensure everyone's running the same version of the applications, and those applications are supported by the vendor at the most recent and previous operating system release levels."

Energy-Saving Initiatives

Helping Enterprises Monitor & Curb Their Energy Use

by John Brandon

ACCORDING TO Socrates, real wisdom is difficult to attain. For those running a data center, it might be easier to find than you think, especially when it comes to implementing energy-saving initiatives. Several extensive and highly detailed programs, such as Climate Savers, The Green Grid, LEED, SPEC Power, and the EPA (Environmental Protection Agency) Data Center Energy Efficiency initiative, can help you examine current data center variables such as airflow and server utilization and then rely on expert research and guidance. Many programs also hold seminars and distribute ongoing research data to help managers stay ahead of the curve.

Green Initiative Rundown

Climate Savers

Industry body that encourages accountability and idea sharing for green computing www.climatesaverscomputing.org

EPA Energy Star for Data Centers

Ongoing research program studies energy use specifically for server loads in data centers

www.energystar.gov/index.cfm?c=prod _development.server_efficiency

The Green Grid

Green computing program that focuses on environmental considerations in the data center www.thegreengrid.org

LEED (Leadership in Energy and Environmental Design)

Focuses on building metrics for more energy-efficient power use www.usgbc.org/leed

SPEC Power

Benchmarks for server energy efficiency when used in a data center www.spec.org/power_ssj2008

Initiatives Available

For the most part, the most reputable programs are just a click away. For example, a good starting point is the EPA site, with guidelines for data center managers, at www .energystar.gov/index .cfm?c=prod_develop ment.server_efficiency. Here, the EPA hosts fact sheets, whitepapers, event news, and reports that are geared for your business size; there are links for larger enterprises and for smaller companies with information specific to your needs. The Energy Star program itself is evolving and in a factgathering mode; it focuses primarily on server utilization, an obvious

offshoot of the EPA's Energy Star program for client PCs.

"The EPA is working on an Energy Star specification for servers, as well as collecting data on data center infrastructure energy use," says John Koomey, Ph.D., a project scientist at Lawrence Berkeley National Laboratory and a consulting professor in the Department of Civil and Environmental Engineering at Stanford University. He also advised the EPA on best practices for data center energy efficiency.

Another program that Koomey recommends is called SPEC Power (www.spec .org/power_ssj2008), which evaluates and scores servers for volume use in a data center. Initially, the benchmarks address server-side Java loads, but the program is expanding into all areas of server utilization related to power use.

"Definitely review the new SPEC Power measurements," says Koomey. "You can use those measurements to get a real sense for how much power new servers will use in the field, and thus you can purchase servers based on efficiency, which you couldn't really do before SPEC Power existed."

Both The Green Grid (www.thegreengrid .org) and Climate Savers (www.climate

saverscomputing.org) programs have extensive corporate backing from companies such as Google (www.google.com) and Intel (www.intel.com) and are designed for a more comprehensive plan of action than just server loads. For example, Climate Savers is more informational in its approach, hosting a blog with advice for IT managers and offering several comprehensive guidebooks to study and research. It's meant to spark ideas and gain traction as an industry body that encourages accountability and partnership.



Meanwhile, The Green Grid is more about metrics in the data center, standards and measures for energy use across the industry, process improvement, and tangible and practical tips for managers to implement now.

"There are many great organizations such as The Green Grid and the Climate Savers Computing Initiative which provide best practices for designing energy-efficient data center and hardware," says Bill Weihl, the Google green energy czar. "These programs provide useful tools, resources, events, and best practices that can help you better manage your company's hardware infrastructure."

Implementing Program Ideas

If these programs encourage discussion, analysis of metrics, and accountability between organizations, the next course of action is to actually implement the plans.

One program that is geared more for immediate action and real change inside a modern data center is the U.S. Green Building Council's LEED program (Leadership in Energy and Environmental Design; www.usgbc.org/leed), which provides specific and measurable variables for lower energy use and controlling energy costs.

"Our new data center buildings will be designed with the objective of maximizing points under the LEED rating system," says Mike Manos, the general manager of

> Microsoft Data Center Services (www.microsoft .com). "The LEED (Leadership in Energy and Environmental Design) Green Building Rating System is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings. For example, our buildings are painted with low emissivity (low-e) paints. Low-e paints can block heat transfer through walls, and certain formulations are also highly reflective. Depending upon the climate, we can adjust the reflectivity of the low-e paint used to meet our heating and cooling needs."

> LEED is also more focused on the building that houses a data center rather than the servers and storage inside, pro-

viding a program for professional accreditation and certification. However, the program also provides plenty of brochures, guidelines, presentations, and data center profiles to review. One of the main points that LEED makes is that to be energy efficient in a data center, you do not need to rebuild or renovate your current building. It provides guidelines for existing data centers to move to a greener computing infrastructure by making gradual but important changes, such as air quality, equipment recycling programs, and water cooling as an energy alternative.

In the end, no matter which program you use—or if you consult all programs—the ultimate goal of more energy efficiencies in computing is a process that takes time and planning, yet the rewards benefit not only the company bottom line but also the global environment.

No matter which progam you use, the ultimate goal of more energy efficiencies is a process that takes time and planning.

SECURITY JULY 18, 2008

Easier Database Monitoring & Auditing

Tizor Systems Mantra 6 Helps You Reduce Risk & Regain Control



Most companies do not have a complete inventory of their databases or the types of data that exist within them. This lack of visibility creates risks that could lead to insider abuse, data breaches, or failure to

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Tips For Saving Energy

Experts Suggest Techniques For Conserving Power In The Enterprise

by Robyn Weisman

WHEN YOU PUT together your fiscal 2008 IT budget, you may not have been anticipating gas prices jumping to nearly \$5 a gallon and a spike in electricity costs (in

large part due to transporting coal and other resources). Even if you did account for these increases, you probably are looking for ways to cut your energy bill even a little bit. Here are a few tips either to get you started or help you along in your quest to save energy and cut costs.

Consolidate & Analyze Data

Nowadays data centers are increasingly flooded with heterogeneous data sources and data types, and too often IT departments fail to properly consolidate, analyze, and manage this data in a centralized, integrated fashion. As a result, it is often difficult to search for data, report on data, and ultimately make informed, highimpact business deci-

sions from that data, says Erik Swan, CTO of IT search solutions provider Splunk (www.splunk.com).

Not only do you have to account for the electricity for network and cooling systems, you are dealing with all the information can now understand how to more effectively partition processes on servers; deploy servers within the data center; and provide chargeback to customers, whether external or internal, for their specific power usage and heat generation, incentivizing them to



reduce loads, smooth out peak usage, and reallocate resource utilization," says Swan.

According to Swan, the net goal of using IT search is giving data center managers a holistic view of their entire operations, helping them more effectively use costly

can save organizations tens of thousands of dollars per year," Cavalancia says. "This often-overlooked cost savings can significantly reduce [your] total cost of desktop ownership throughout the desktop life cycle and leave more money in the budget for green technology."

According to Cavalancia, the state of Delaware found that employee morale improved because state workers said they

liked that their employer was doing something about energy issues. And higher morale tends to boost productivity, which potentially can lead to even bigger gains for your organization, albeit ones that are more qualitative than quantitative in nature.

Use Virtualization

"One of the core benefits of virtualizationserver consolidation and containment—is that companies can squeeze multiple application and operating system workloads on the same server," says Josh Leslie, director of alliances at VMware (www.vmware .com). "As you might expect, this dramatically reduces server count and has a transformational impact on IT energy consumption, often re-

ducing server energy cost and consumption by 70 to 90%. We estimate that for every server virtualized, customers can save about 7,000 kilowatt hours, or four tons of CO₂ emissions, every year."

If you have already deployed some form of virtualization in your data center, you can increase energy efficiency even further by implementing distributed power management, says Leslie. If you presently consolidate 10 servers onto two physical machines to run your applications, for example, you might consider powering down to one physical server at night, when you have fewer applications to run.

Turn Off Unused Equipment

You can save up to 66% of your organization's normal power consumption by shutting down office hardware, such as client PCs, monitors, and printers, during your off hours, says Dave Lobato, environmental program manager at HP Imaging and Printing Group (www.hp.com).

Jim Alves, executive vice president at IT automation solutions provider Kaseya (www.kaseya.com), says that you can calculate the amount you are contributing to your organization's energy savings by using statistics from Ohio University's "Green" Computing Guide (www.facilities.ohiou.edu /greenpc). Among its findings: A computer continuously running emits 2,161 pounds of carbon dioxide per year and costs about \$45 per year to power. In contrast, a PC running eight hours a day saves you about \$30 a year. If you're running 200 client computers, that savings translates to about \$6,000 a year.

Perhaps the biggest hurdle in implementing something so basic will be your employees, many of whom may not be cognizant of the potential energy savings in shutting off client systems. Sending around an email—or three—telling them to shut off inactive hardware should be sufficient for most people. Or you can use IT automation software (see the "Automation Is The Key" sidebar for more information).

Revise Your Print Setting

Lobato also recommends making duplex printing the standard setting on your printers. Not only does duplex printing save on paper, which uses fossil fuels to be made from trees, you use less energy by halving the number of times (when possible) you need to ramp up the printer. Over time, that energy savings will add up.

Best Tip: Automation Is The Key

Jim Alves, executive vice president at IT automation solutions provider Kaseya (www.kaseya.com), recommends using IT automation software to power down PCs, servers, and other networked devices in an efficient fashion. According to Alves, IT automation software supplements data center initiatives by using technology, such as setting and managing power policies, on remote desktops and laptops.

"Combined with technologies . . . to get around the standby dilemma, IT professionals at [SMEs] are able to remotely power off computers and promote energy efficiency during nonproductive hours," Alves says.

Moreover, automation software can also power on machines to conduct routine off-hour IT tasks, Alves says. "This helps organizations implement 'best practices' for green IT within their companies, yet allows them to service and support their equipment," he says.

You can save up to 66% of your normal power consumption by shutting down office hardware.

coming from your servers, increasingly sophisticated infrastructure systems that oftentimes fail to produce much in the way of information, and the fact that a bunch of different people all view this disparate data from different perspectives.

Swan recommends deploying an IT search tool that can assist you in understanding the relationships between application workloads throughout the day and their heat generation and power consumption. "These relationships mean IT departments

and scarce resources and reduce their impact on the environment.

Implement Power Management Features

Nick Cavalancia, IT management expert at Windows network management solutions provider ScriptLogic (www.scriptlogic.com), recommends checking to see whether the IT management solutions you use offer power management features.

"In addition to the conservation of energy, power management of desktop computers

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3CX Phone System comes in four editions, all supporting an unlimited

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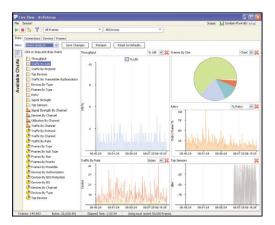
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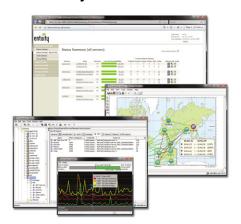
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EYE 2008 SP2 includes support for current heterogeneous devices, including the Cisco SSL Proxy module and client

support on Windows Vista. To help network managers and architects visualize and author network topology in a geographical content, the new EYE software suite includes an EYE Connectivity Viewer to add background images and export maps in Microsoft's Visio format. The new features let IT staff superimpose network models or troubleshooting diagrams over maps or schematics.

JULY 18, 2008

EYE 2008 SP2 also features expanded router protocol awareness that lets EYE automatically discover HSRP-active routers and their peers, collect performance data, present reports, and deliver alerts on operational anomalies and thresholds. The real-time reports and alerts let IT staff proactively optimize the operation of high-availability networks. With scriptable device renaming, EYE 2008 SP2 helps automate workflows to fit the strategies of network admins and power users.

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Imperva SecureSphere Web Application Firewall Helps Businesses Protect & Monitor Sensitive Data



WEB APPLICATION ATTACKS can produce devastating results ranging from high-profile data breaches to brand damage, lawsuits, and fines.

The Imperva SecureSphere Web Application Firewall is an accurate, effective Web application firewall. The SecureSphere WAF protects online applications against sophisticated application-level attacks such as SQL injection and cross-site scripting, prevents theft and leakage of data from online applications, and meets the PCI DSS (Payment Card Industry Data Security Standard) section 6.6 application security requirement.

The SecureSphere Web Application Firewall helps businesses better protect and monitor their applications and sensitive data. Imperva's Dynamic Profiling technology automatically builds a model of legitimate behavior and adapts to application changes over time, keeping SecureSphere's application defense up to date and accurate without manual configuration or tuning.

Deployed in minutes with no changes to the existing infrastructure, SecureSphere protects and monitors the complete application stack from the individual application to the server and network. Imperva's Transparent Inspection technology delivers multigigabit performance, submillisecond latency, and options for high availability that meet the most demanding data center requirements. For large-scale deployments, the SecureSphere MX Management Server centralizes and streamlines configuration, monitoring, and reporting.

The SecureSphere Web Application Firewall leverages multiple inspection layers and security defenses to provide the highest level of protection.

Imperva SecureSphere Web Application Firewall

Starts at \$17,500

Protects online applications against sophisticated attacks such as SQL injections

(650) 345-9000

www.Imperva.com

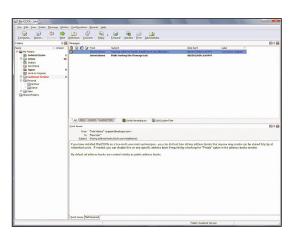


Messaging & Telephony

JULY 11, 2008

Handle Multiple Users & Email Addresses

InterVations' MailCOPA Email Software Simplifies Email



InterVations MailCOPA updates all shared email users in real time, displaying critical message information.

CHECKING VARIOUS EMAIL addresses of co-workers or looking through your own accounts can often be a time-consuming burden. InterVations MailCOPA v. 9 is a multiuser email program for Windows that can help you manage multiple email addresses. If you have a team of employees using multiple email addresses on multiple computers, MailCOPA ensures that all emails are secure, stored centrally, and available immediately to the people who need to access them.

MailCOPA can bring together each employee's emails from multiple accounts and make it easy to share emails across the network. MailCOPA lets a team of employees answer messages without the risk of emails being answered multiple times by different workers. MailCOPA updates all shared email users in real time, displaying information about which messages have been opened or replied to. The program provides a simple, efficient way to manage help desk tickets, technical support requests, and any information stream from clients and prospects.

The interface is customizable, and you can create macros and templates to personalize corre-

spondence. Messages can be threaded for easy viewing or locked to ensure they won't be deleted.

InterVations MailCOPA

Starts at \$39.95 for a five-user, single machine license; 30-day trial version available

Manages multiple email addresses, ensuring emails are secure and centrally stored

(508) 833-1660



SECURITY

NETWORKING & VPN July 11, 2008

Monitor Infrastructure Intelligence

Get The Most Out Of Your Applications
With Integrien Health Check



Integrien's Health Check service provides a summary of transactions, trading, and tier cross-section performance.

TO EFFECTIVELY MONITOR the progress of applications and services, enterprises must determine where internal issues originate. Integrien offers a new systems management service for this purpose: Integrien Health Check.

Health Check uses the data center operations solution Integrien Alive to access historical data and analyze business performance. Companies are first required to provide 60 to 90 days of past infrastructure data. As Health Check deciphers the causes of brownouts and outages, it captures models of problematic behavior so companies can identify recurring bad patterns. Through Health Check's insight

into the "heartbeat" of a specific application, users can observe how applications are performing based on static threshold results.

To understand the association between business performance, user experience, and IT communications, Health Check employs an advanced correlation method to develop a PMDB (Performance Management Database). A PMDB analysis includes the following reports: application behavioral analysis report, "top influencers" report,

and a root cause forensics report. This database can supply crucial information regarding the interrelation of infrastructure components, enterprise operations, and user practices.

Integrien Health Check

Application service that pinpoints IT performance problems

\$35,000

(949) 788-0555

www.integrien.com





Restore Access To EFS-Encrypted Files

Advanced EFS Data Recovery Decrypts Protected Files

MICROSOFT ENCRYPTING File System (EFS) is an integral part of Microsoft Windows operating systems that enables users to protect their files against unauthorized access.

The EFS appears transparent to the user, providing on-the-fly encryption and decryption of data with strong cryptographic algorithms.

The ease of use and transparency to the end user creates a false impression of impeccability of the Encrypting File System in the eyes of users, who often forget about the encrypted files when they reinstall Windows or transfer a disk into a new, upgraded computer.

Elcomsoft Advanced EFS Data Recovery decrypts the protected files and works in all versions of Windows 2000, XP, 2003, Vista, and Windows Server 2008. The recovery is still possible even when the system damaged or can't be booted, or when some encryption keys have been tampered with.

Advanced EFS Data Recovery quickly and efficiently decrypts files protected with EFS. Scanning the hard disk directly sector by sector, the program locates the encrypted files as well as the available encryption keys and decrypts the protected files. The direct access to the file system allows Advanced EFS Data Recovery to recover encrypted files in the most difficult cases, even if the disk with data is only available without a valid user account

JULY 4, 2008

to log in into system or other similar scenarios.

With Advanced EFS Data Recovery, instant access to EFS-protected files is often possible. Supplying a valid password to the user account (or a previously used password) or an account that serves as a data recovery agent (Administrator account by default) can often provide on-the-fly decryption of the protected files.

Elcomsoft Advanced EFS Data Recovery

Standard \$149; Professional \$299

Restores access to EFS-encrypted files

+7 495 974 1162

efs.elcomsoft.com



STORAGE JULY 11, 2008

Multiplatform Migration

Ease Migration Pains With PlateSpin's PowerConvert Version 7.0

EFFICIENCY IS KEY in any data center, but it can be difficult to achieve when you need to move and rebalance workloads among different types of environments and platforms, a need PlateSpin addresses with PowerConvert Version 7.0.

PowerConvert Version 7.0 is designed to operate in a heterogeneous environment to simplify the management of server workloads. Version 7.0 increases support for Red

Hat Enterprise Linux, 64-bit Windows Server, and Citrix XenServer environments, as well as

image-based disaster recovery capabilities and improvements to migration speed for large-scale deployments.

Support for Linux migrations includes P2P (physical-to-physical) and V2P (virtu-

al-to-physical) capabilities. P2V (physical-to-virtual) is supported for 64-bit Windows environments, and Citrix support includes

X2P (anywhere-to-virtual) and V2I (virtual-to-image). PowerConvert's incremental imaging enables users to import and export images from a repository of server workloads, improving backup and disaster recovery and reducing costs.

With a drag-and-drop interface, users can remotely decouple workloads from a server and stream

them to another host, physical or virtual. In essence, PowerConvert is designed to enable users to maintain service-level requirements by optimizing and relocating workloads quickly.

Also new is improved transfer speed for workload migrations partially courtesy of Server Sync, which offers testing capabilities that can be done over a variety of network types to reduce downtime and maximize migration integrity.

PlateSpin PowerConvert Version 7.0

Per-use license (one-time license): \$175 Per-workload license (perpetual use): \$425

Provides support for migrations across a variety of different environments and platforms

(877) 528 3774



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STORAGE JULY 4, 2008

Hard Drive Destruction With No Caveat

Verity Systems' VS7000 Hard Drive Destroyer Prevents Data Theft

THE DISPOSAL OF computers requires careful forethought; not only should electronics be disposed of in an environmentally friendly manner, but obsolete hard drives often contain sensitive data. Simply tossing an old hard drive in the trashcan is not effective disposal; anyone can retrieve the

drive and access the data it contains, even if all the files on the drive have been deleted and erased. Leaving data on

a discarded hard drive is unwise for any computer user, but it can be disastrous for a

business. Physically destroying a hard drive is a surefire way to ensure that no data can ever be mined from a particular device.

The Verity Systems VS7000 Hard Drive Destroyer is specially designed to render a hard drive completely useless. It's completely self-contained, needing only a minimal amount of hand cranking to operate; this makes it particularly useful if a situation arises wherein expeditious disposal is necessary but electricity is unavailable.

The VS7000 can destroy any standard hard drive or laptop drive in less than 15 seconds with only eight turns of the hand crank. A special ratcheting feature makes destroying multiple hard drives simultaneously or crushing especially resistant hard drives a minimal effort.

The VS7000 works by pressing down on a hard drive, bending it approximately 90 degrees. In doing so, the platters are bent and the heads, motor, and circuit boards are damaged, rendering the drive useless and the data unrecoverable.

Verity Systems

\$4,125

Manual, portable device that physically destroys hard drives to prevent data theft

(800) 642-5151

www.veritysystems.com



STORAGE JULY 4, 2008

Manage Archived Data

Navigate Your Information Stores With B&L's Archived Data Manager



THE ABILITY TO effortlessly search for a single piece of information amid a sea of data is a dream come true for many organizations. With simple organization in mind, B&L Associates has created ADM (Archived Data Manager), a Web-based application that combines historical backup catalogs and organizes them for easy access and management of offline archived data.

Using B&L's patent-pending data extraction technology, ADM can quickly load a server's backup catalog from popular tape backup solutions, including Symantec's Veritas NetBackup, EMC's Legato NetWorker, CA's ARCserve, and HP's Omniback II and Data Protector. ADM features a simple view of a company's backup catalog information and an easy method of searching files by backup

application, backup sever, backup client file name, date/time, and expiration date.

B&L highlights ADM's compliance with the amendments to the Federal Rules of Civil Procedure regarding historical backup data. ADM's file-level search makes file discovery quick and easy, which reduces the amount of tapes sent out for content indexing. In accordance with other state and federal laws, ADM features alerts to archived files that are ready for expiration, letting organizations quickly reduce their historical data and avoid related liabilities.

ADM features vast accessibility; once Archived Data Manager has been installed on one computer, it can be accessed from any computer with an Internet connection, making enterprisewide use possible. Other features include rapid data extraction, enabling ADM to load a server's backup catalog into the ADM database without interrupting normal business procedures.

B&L Archived Data Manager

Provides a single view of backup catalog information and an easy way to organize and search for files

(800) 652-2635

www.bandl.com

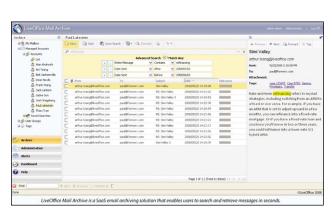


Messaging & Telephony

JULY 4, 2008

Convenient Mailbox Management

Email Archiving For Enterprises Of Any Size



IT and HR can conduct an advanced Mail Archive search of user accounts by message, date, and content.

REGARDLESS OF A business' size, forward-moving organizations must respond to the increasing volume of emails filling user inboxes. Email archiving is a necessity for maintaining an efficient exchange of information, but this can become a challenge when IT resources are limited.

LiveOffice Mail Archive offers an archiving, compliance, and e-discovery solution for customers who want to minimize storage costs yet protect their organization at the same time. This SaaS platform uses Web 2.0 along with cloud computing to execute quick search and retrieval.

Through full compliance, LiveOffice Mail Archive enables companies to cen-

tralize and search the email repository, as well as identify user misconduct within individual messages. Unlimited mailbox storage gives users the ability to view and recover both archived messages and attachments. Discovery provides rapid search response and communication protection.

LiveOffice Mail Archive SaaS is designed

to help IT simplify archive management strategies and secure email data without placing a burden on internal finances.

LiveOffice Mail Archive

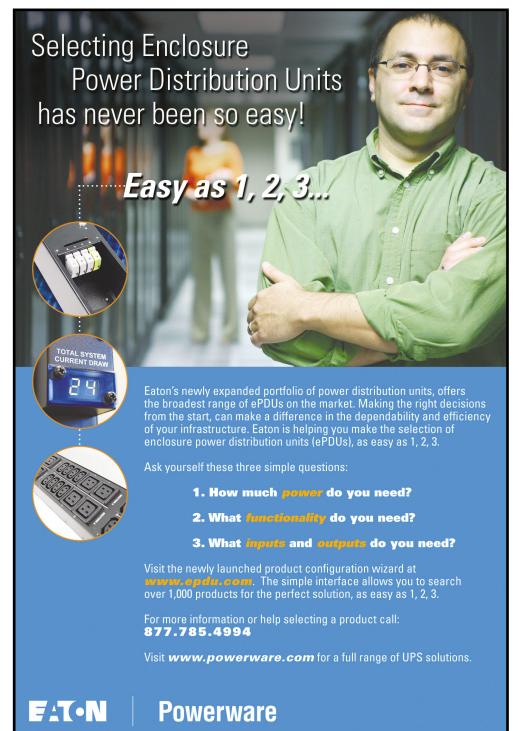
Cloud storage archiving platform for streamlining user emails

\$8 per mailbox, per month; includes unlimited storage and personal archive access for end users

(800) 251-3863

www.liveoffice.com





PRODUCT OF THE WEEK

Cabling With Ease

HellermannTyton's RapidNet Preterminated Cables Reduce Cabling Hassles

by Sue Hildreth

RUNNING CABLES around the data center is certainly one of the most time-consuming aspects of any new installation. It can be both cumbersome and expensive in terms of the labor costs.

One increasingly popular solution for streamlining the process is preterminated cabling, which is already cut to size and tested in the factory. According to Jason James, technical director at HellermannTyton (414/355-1130; www.hellermanntyton.us), a Milwaukee-based maker of cabling products including the RapidNet preterminated cables, the utility of these precut products is in speed of deployment, consistency of performance, and reusability.



HELLERMANN-

TYTON RAPIDNET

PRODUCT OF THE WEEK

Description: RapidNet is a high-performance preterminated cabling system that utilizes a proprietary bundled cable cut to customerspecified lengths; each length of cable is equipped with cassettes at both ends to protect the terminations and comes pretested and prelabeled from the factory.

Interesting fact: RapidNet's universal design allows for both copper and fiber cassettes to be used within the same modular panel.

(414) 355-1130 www.hellermanntyton.us

Consistency Without The Guesswork

HellermannTyton's RapidNet cables use a proprietary bundled cable with six highperformance Category 6 (250MHz for Gigand labor costs. HellermannTyton estimates savings of up to 85% in total installation time. James notes that they also save money on contractor costs because inhouse staff can often do the work.

"You've got maximum repeatability for connection after connection. So all you're asking them to do is know where to plug in the cassette," James says. All of the products are tested before leaving HellermannTyton.

Up & Running, Fast

Preterminated cables are also useful in situations where a temporary network is needed, such as during a move or in a colocation facility, says Petrino.

"When clients do not own the real estate and are renting, this offers an easy exit strategy with easy redeployment. Clients are not faced with huge bundles of cable "It's a large bottleneck, and [it's] where the big slowdowns often start. So being able to plug this six-way cassette into that space and deliver the solution in a fraction of the time makes for greater efficiencies in data center environments," says James.

Plug & Play

To ensure plug-and-play capabilities, RapidNet's universal design also allows for both copper and fiber cassettes to be used within the same modular panel. Each modular panel can hold up to four cassettes [fiber or copper]. The copper RapidNet product has six port links, with 24 ports in a 1U footprint, and can be ordered in lengths of from 10 to 295 feet. The fiber product has up to 12 fiber links with 48 fibers in a 1U footprint. It can be ordered in lengths up to 1,000 feet. All product is tested to both TIA (Telecom-

munications Industry Association) and ISO 11801 standards and manufactured in an ISO 9000 and ISO 14000 production environment.

The factory testing and certification is a benefit of using preterminated cables, notes Petrino. "A preterminated solution comes pretested with a report from the factory, making the field check only a verification," he says. "These deployments in the field have a greatly decreased failure rate requiring less repunching of cable runs."

The use of high-volume manufacturing processes also significantly reduces jobsite waste and has an overall positive environmental impact, he says.

One unique feature of the copper version of Rapidnet is its alternating cable design. Rather than using six identical cables, which creates the

potential for alien crosstalk, RapidNet uses two types of cable designs, alternating one with the other to eliminate the risk of alien crosstalk, says James.



abit Ethernet transmission) UTP cables cut to customer-specified lengths, terminated at both ends and housed within patented cassettes, for a "plug-and-play" solution. The cassettes are designed to simply snap into a RapidNet modular panel, which fits into a standard 19-inch rack.

Preterminated cables make the most sense in areas with high labor costs, or if you want consistency between multiple branch installations, says Michael Petrino, vice president of PTS Data Center Solutions (www.ptsdcs.com), a data center design and consulting firm in Orange County, Calif.

"If you are doing multiple office rollouts and you want to have the same look, feel, consistency, and cost structure across all the projects, this is a great solution to overcoming the challenge of finding a local data cabling contractor in different markets," says Petrino.

James notes that preterminated cables can provide consistency and save on time

numbering in the hundreds. Typically, the cables are grouped into looms of six or 12, which are far more manageable when pulling them back and redeploying," says Petrino.

One particularly valuable application of preterminated cabling is in disaster recovery situations. Some consulting firms that specialize in disaster recovery have stockpiled RapidNet cables, he says, and any business can use them to reassemble their network quickly in a new setting.

"With some nominal links [of RapidNet], you can roll out a network in almost any space, be it the floor of a local gymnasium or a whole bunch of temporary buildings. You can get your business back up and running in a moment's notice," says James.

He notes that the most time-consuming aspect of a cabling project tends to be connecting the cables to the back of the cabinets or frames because it is usually a tight space that only one person can fit into.

RAPIDNET PROJECT ESTIMATOR

HellermannTyton offers a RapidNet cost estimator for potential customers interested in pricing out a project. The free, Web-based tool, which can be found at www.htnetwork .com, takes information you input regarding your installation and provides a bill of materials estimate, along with invoices, all of which can be exported into Microsoft Excel. The RapidNet Estimator is accessible to registered users only; anyone may register for access at htnetwork.com/account.aspx?action=register.

SECURITY JULY 4, 2008

Keep An Eye On Network Traffic

Palo Alto Networks' PA-2000 Series
Of Firewalls Offers Affordable Protection

COMPANIES THAT HAVE remote branch offices and swelling ranks but limited IT staff face vulnerabilities to security threats.

Palo Alto Networks addresses these needs with the PA-2000 family of midrange firewalls. The firewalls enable midsized enter-



prises, as well as those with remote locations, to have comprehensive visibility and policy control over network flow and the applications therein, all at a cost-effective price.

Features of the PA-2000 series, which consists of the PA-2020 and PA-2050, include purpose-built hardware, identification technology, and PAN-OS, a security-specific OS with integrated networking, threat prevention, and management features.

Other features include App-ID, User-ID, and Content-ID. App-ID provides visibility and control of hundreds of applications, and it enables policy enforcement according to application, category, underlying technology, behavior, and risk. App-ID functions regardless of application port, protocol, encryption, or evasive tactic.

For user- or group-specific policy definition and reporting that integrates with Active Directory, the PA-2000 firewalls sport User-ID. The Content-ID feature

facilitates real-time, broad-based threat prevention, URL filtering, and file blocking. The PA-2020 model features throughput of 500Mbps, while the PA-2050 offers 1Gbps.

The firewalls boast a high-speed backplane and up to 20 traffic interfaces and dedicated out-of-band management interfaces.

Palo Alto PA-2000 Series Firewalls

Start at \$12.000

Provide cost-effective firewall protection for midsized enterprises or those with remote branches

(866) 207-0077

www.paloaltonetworks.com



Messaging & Telephony

JUNE 27, 2008

Intelligent Capture & Exchange For Business Communications

Kofax's Communication Server 8.0 Adds Increased Functionality

THE EFFICIENT and highly functional exchange of information is vital to the success of any company. Businesses need to be able to pass information among parties and keep a reliable archive of all messages. Kofax Communication Server 8.0 (known in previous iterations as TOP-

enterprise fax server, but it can also be connected to applications such as those from SAP, Microsoft, Novell, IBM, and other ISV systems. A number of new features have been introduced in this version of Kofax Communication Server, among them VMware server virtualization sup-



SAP, ERP/ECM/CRM/Workflow, KOFAX Capture

Desktop E-mail,

CALL Communication Server) addresses the need for a single, central communication application.

Kofax Communication Server 8.0 is designed to automate the exchange of information between high-end, mission-critical applications. All inbound and out-bound electronic messages in virtually any format—including email, fax, voice-mail, and SMS—can be routed across large distributed environments with the server. Further, Kofax Communication Server 8.0 can convert messages from one format to another and archive each one.

Kofax Communication Server 8.0 can be configured as a high-volume

port, advanced email functionality, support for H323 and SIP, and enhanced FoIP (Fax over IP) capabilities. It also supports disaster recovery systems and environments such as Lotus Notes 8, SAP NetWeaver 7.0, and Windows Vista.

Kofax Communication Server 8.0

Offers enhanced support for FoIP, advanced email functionality, and virtualization support

(949) 727-1733

www.kofax.com





Product Releases

CLIENTS

■ 4D announced 4D Web 2.0 Pack v11 Release 2, a version that combines 4D Ajax Framework and 4D for Flex to deliver live Web and Internet applications. 4D for Flex provides Flex-to-database direct connectivity to integrate Flex-to-SQL database direct connections that offer high-performance connectivity to 4D Server v11 SQL and other industry-standard SQL databases. 4D Ajax Framework is an integrated Ajax framework and application server that combines the power of Ajax and 4D databases. Using the power of HTML 5 and Google Gears, users can access their Web applications even when they are offline. Release 2 provides the necessary tools for developers to quickly and professionally bring their applications to the Web.

Messaging & Telephony

- Asempra Technologies unveiled Asempra BCS (Business Continuity Server) 2.7, software that allows companies to recover Microsoft applications and data in seconds. The BCS 2.7 release provides new levels of scalability to support larger and consolidated Exchange 2007 and business-critical SQL applications designed for midrange customers. Asempra's BCS allows users to send and receive emails or process SQL transactions while the complete data set is being recovered in the background. With full support for both Exchange Server 2003 and Exchange 2007, the BCS 2.7 release is also helpful for customers upgrading to Exchange Server 2007 because it can guard against potential business disruptions during the process. Asempra's BCS 2.7 provides capabilities to support customer data growth while ensuring continuous data accessibility and instantaneous data and application recovery in the event of a failure.
- **Cemaphore Systems** announced version 2.3 of its MailShadow Enterprise solution for Microsoft Exchange continuity and disaster recovery. MailShadow 2.3 gives enterprises the ability to protect, replicate, fail over, and back up thousands of individual mailboxes between geographically diverse, active, running Exchange servers. MailShadow 2.3 allows organizations wishing to manage their own internal email continuity infrastructure to meet the fastest, fully populated Exchange mailbox RTO (recovery time objective) in the industry. Further, MailShadow 2.3 mailbox transaction replication delivers an Exchange mailbox user data RPO (recovery point objective) of less than 10 minutes. The real-time RPO status per user is viewable in the MailShadow management console. Additional new features in MailShadow 2.3 include enhanced firewall support, embedded monitoring and enhanced diagnostics, and an automated site survey tool.
- MicroWorld has announced its comprehensive content security software for mail servers, MailScan version 5.6. MailScan is compatible with Windows Vista, 64-bit Windows platforms, and Lotus Domino 8 mail servers. MailScan uses content filtering techniques to scan incoming messages; it also contains an antivirus scan engine and an advanced heuristic scanner that scans both inbound and outbound emails. MailScan now includes a Web-based administration console, which allows remote administration via a browser and also enables LDAP and POP3 authentication.
- Polycom launched its CMA (Converged Management Application), which is a network management and desktop video platform designed to ease the deployment and management of enterprise video networks and reduce the overall complexity of desktop, group, and telepresence solutions. The

CMA Desktop component is an enterprise desktop video application that supports high-definition video, voice, and content. Polycom CMA has seat licenses that can be used for endpoints, infrastructure, and CMA Desktop.

Polycom also introduced its RMX 1000, a high-performance, multipoint visual communication conferencing platform designed for small and medium-sized enterprises and large enterprise branch offices. The RMX 1000 delivers on-demand video collaboration with support for multiple sites in the same calls. The offering also features UltimateHD high-definition video, voice, and multimedia content-sharing capabilities. The RMX 1000 media server is customized to handle the unique requirements of high-performance visual communication. Other features include support for secure conferencing through AES media encryption and Lost Packet Recovery technology.

NETWORKING & VPN

- Exaprotect has announced the latest version of its network configuration change management solution, Solsoft Change-Manager. ChangeManager's new features include support for Fortinet Fortigate 3.0, Juniper JunOS 9.0, Netscreen 6.x, Provider-1 R65, Cisco, and Check Point. Change-Manager enables network managers to more easily operate network-wide configurations, and it provides security managers visibility in to the changes made. ChangeManager also integrates with Exaprotect's security information and event management products, LogManager and EventManager.
- Remote Appliance, which provides remote operating system provisioning. The KBOX Virtual Remote Appliance works with a central KBOX Systems Deployment Appliance to deploy operating systems to remote areas. It decreases costs and benefits IT personnel because they can centrally execute tasks, such as distributing software or managing configurations. Additionally, the KBOX Virtual Remote Appliance uses a GUI-based preinstallation setting for the mending of corrupted systems and can provide complete reports of system history, installation, and images.
- Lancope has released StealthWatch System 5.8, an upgrade to its NBA (network behavior analysis) and response package. The upgrade is designed to help companies further utilize flow data to significantly extend the scalability and value of behavior-based anomaly detection and network performance monitoring. New features include IPv6 support and visibility, application awareness, risk management, and network performance management. Supported IT initiatives include WAN optimization, PCI compliance, MPLS migrations, IPv6 rollouts, and data leakage prevention.
- Opalis Software has introduced Opalis Integration Pack for CA AutoSys, which includes CA AutoSys Workload Automation and other parts of IT operations. This program is designed to create a less complex process for leveraging event-based automation and critical path analysis. Users can set off CA AutoSys workload processing from different external systems events with Opalis Integration Pack for CA AutoSys; users can also relay information from CA AutoSys to other enterprise systems for more automated tasks. Finally, workflows can examine the status of CA AutoSys jobs and take automated diagnostic and remedial actions for unsuccessful jobs while generating Service Desk tickets in reaction to those job status indicators.
- Profound Logic Software released the Genie Administrator, which is Profound Logic's new administrator interface for its

Product Releases

Genie green-screen modernization platform. Genie Administrator is a graphical interface that lets users easily configure and maintain Genie Web-enabled System i and Power Systems applications. The Genie Administrator resides on the IBM i, and users can tap into its interface with a Web browser and a secure login. The offering lets users set up and configure unique environments for testing, development, and production; define specific skin and template properties; and copy and delete any of the environments. The Genie Administrator also includes AJAX settings, the Genie Accelerator, and designer enablement.

■ Secerno has introduced Secerno.SQL, a database activity monitoring and blocking program virtualized on the VMware platform. This platform lets Secerno.SQL customers decide to deploy Secerno hardware appliances or use VMware deployments without problems with performance or manageability. With more than 20,000 corporate customers, VMware will help Secerno provide comprehensive support for virtualized environments. Additionally, customers will have roll-out protection through virtual appliances, which will guard a large number of databases. Organizations can still use the features of Secerno.SQL and will be able to arrange database protection swiftly and control all databases from a central point.

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- SonicWALL has announced the release of GMS (Global Management System) 5.0 and Viewpoint 5.0, which integrate MySQL 5.0, management, monitoring, reporting, and third-party authentication. GMS and ViewPoint 5.0 expand to the E-Class Aventail SSL-VPN remote access solutions. The single management interface reduces cost and simplifies network management. Multitenant functionality for third-party authentication addresses Active Directory and LDAP servers and secures numerous domains. Administrators can use the expanded library to monitor remote activity including UTM (unified threat management) and Web usage. GMS and ViewPoint 5.0 will scale with expanding organizations, and tight integration can improve performance.
- **Tripwire** has announced its free utility, Tripwire ConfigCheck for VMware ESX 3.0. ConfigCheck evaluates configuration settings for VMware ESX 3.0 and 3.5 hypervisors, determines potential configuration risks, and provides prescriptive remediation advice to help ensure security. ConfigCheck gives users visibility into risks that might exist in their virtual environment due to misconfiguration; it also gives recommendations on how to correct configuration settings.

PHYSICAL INFRASTRUCTURE

- Adder announced the AdderLink X50 video extender, a link-transparent USB and high-performance video extender for video up to 1,920 x 1,200 and digital stereo audio over a single CATx cable. The AdderLink X50 is designed for use in applications where users require their USB peripherals, such as keyboards, mice, and graphics tablets, to be extended up to 165 feet from the computer. Beyond more traditional uses, the X50 can also work with interactive digital signage applications. The AdderLink X50-Multiscreen adds a second video and a transparent, high-speed RS-232 connection. It uses Adder's USB extension technology to extend USB up to 165 feet. Local control of extended computers through a video and audio output at the transmitter unit is also possible.
- AFCO Systems released a trio of power distribution solutions: Basic, Metered, and Smart. The three solutions provide flexible power deployment as well as power

management and monitoring for missioncritical data center environments. The Basic, Metered, and Smart solutions integrate with AFCO enclosures, Sidecar cable management, and AFCO Resource Manager software. The Basic PDU series delivers a data center-grade strip where monitoring and communication are not necessary. The Metered PDU series enables data center professionals to locally monitor and display aggregate utilization of the PDU. The Smart PDU series enables real-time remote power management. It delivers local and networked monitoring of power utilization of both the aggregate PDU amperage and the individual receptacle amperage when integrated with AFCO Resource Manager software.

■ Chloride has released the 90-NET 750 kVA three-phase online UPS system, which enhances the abilities of the 90-NET product range to 750 kVA parallelable modules. Additionally, the 90-NET 750 includes a more modern design, which increases its energy efficiency and decreases its footprint by 30%, as compared to other units. The 90-NET 750 also features true online doubleconversion topology that transfers incoming AC power from the mains to a direct current rail feeding the inverter. Finally, it has a paralleling scheme that allows larger data center operators to parallel up to eight 90-NET modules.

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- The Liebert Challenger ITR is a new horizontal flow cooling system for data centers from Emerson Network Power. It's designed to be installed anywhere within a row of equipment racks, providing lateral airflow to cool up to 23kW or 33kW. At less than 8 feet tall and less than 4 feet deep, the Liebert Challenger ITR can fit in lowceilinged computer rooms and even network closets. It also provides reheat, filtration, and humidification/dehumidification.
- Minicom Advanced Systems has released the Smart 216 IP and Smart 232 IP remoteaccess KVM switches. Geared for server room and data center managers, the devices are designed to allow one local and two remote system administrators access and control of up to 16 (216 IP) or 32 (232 IP) servers. Access is made securely at the BIOS level. Remote users can control routers, managed network switches, PDUs, and other serial devices. Both KVM switches integrate into Minicom's KVM.net II centralized management system for remote IT and are rackmountable and 1U-sized. Web servers that grant access to two remote users via a single IP address are also built in.

SECURITY

■ AirTight Networks announced its SpectraGuard 802.11n solution that consists of an 802.11n MIMO Sensor platform, SpectraGuard Planner 5.0 release, and 802.11n WLAN Coverage Estimator. SpectraGuard is a proactive wireless intrusion prevention system that provides comprehensive security from all 802.11n threats with backward compatibility with a/b/g wireless networks. AirTight's SpectraGuard platform includes a live event architecture to reduce repetitive and superfluous events, prioritize threat response, and provide threat exposure analysis. The SpectraGuard platform also offers standalone sensor operation to enforce policy even if connectivity to the SpectraGuard Enterprise appliance is interrupted. AirTight also announced SpectraGuard Planner 5.0 to optimize planning for 802.11n infrastructure and WIPS (wireless intrusion prevention systems) deployment. AirTight's SpectraGuard Planner provides wizarddriven predeployment RF planning capabilities for customers who are planning a new Go to Page 20

NETWORKING & VPN

A Greener VPN

Columbitech's Mobile VPN Conserves Battery Power On Your Mobile Devices



With transparent access to applications and enterprise content, mobile users can work from any network connection with Mobile VPN.

VPN IS ESSENTIAL for business travelers, but many mobile users find that using a VPN connection quickly drains the batteries on their mobile devices. Columbitech's Mobile VPN requires 40% less battery power than traditional VPN tools, enabling secure remote access to the corporate network without crippling the battery life on the traveler's laptop or mobile phone.

Mobile VPN is completely softwarebased, so IT staff members don't need to install additional, dedicated VPN servers. The use of existing hardware resources provides energy savings and lowers the company's capital expenses. And Mobile VPN's software-based approach also allows you to secure wireless legacy equipment, which can help extend the lifetime of network hardware.

Unlike conventional VPNs based on IPSec and L2TP (Layer 2 Tunneling Protocol) for wireline networks, Columbitech's Mobile VPN uses SSLbased VPN with software running at the session OSI level to avoid issues at the application layer. Mobile VPN's session-level architecture allows the VPN connection to meet mobile user demands for stable, transparent use. If a wireless connection drops, Mobile VPN keeps the session open until the user can reconnect to the Internet.

JUNE 27, 2008

For security, Mobile VPN uses the WTLS (Wireless Transport Layer Security) protocol—the common standard for protecting WAP mobile phone transactions. The strong authentication and encryption tools let remote workers securely transmit confidential data to the corporate network, regardless of location.

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Product Releases

Continued from Page 19

802.11n deployment or 802.11a/b/g to 802.11n migration. AirTight is also providing an 802.11n WLAN Coverage Estimator on its Web site. This is a free interactive utility which helps organizations get a better understanding of how 802.11n affects their environments and to estimate coverage, security, and bill of materials, as well as the cost of 802.11n rollouts.

■ RF Barrier, an IEEE 802.11-based technology designed to defend wireless networks from eavesdroppers and hackers, will soon be available from **Meru Networks**. RF Barrier blocks radio frequency signals at the end of a building without affecting the signal inside, preventing someone outside of the building from being able to locate and pene-

building from being able to locate and penetrate the network. The technology is part of Meru's wireless security package which includes firewalls, rogue identifiers, and location-based policy enforcement.

■ **Redspin** announced its WinCAT-AD (Windows Configuration Analysis Tools -Active Directory), which is a set of security auditing tools that lets users view how Group Policy decisions affect Microsoft's Active Directory environment. WinCAT-AD helps network administrators ensure that employees have the appropriate password rules, guest access restrictions have been set correctly on all networked machines, and different user groups aren't generating countermanding or incompatible rules. The Active Directory Group Policy analysis tool outputs its findings into a Web-based report. Interested parties can download the toolset free for a limited time.

■ The Vipre Antivirus+Antispyware from **Sunbelt Software** is intended to be a fast, efficient anti-malware utility with a small footprint, according to its developer. It's designed to guard against malware and rootkits using both signature-based detection of known threats, as well as dynamic analysis to unmask new threats.

■ Symantec has upgraded Symantec Network Access Control and is working on adding an integrated on-demand client. In addition, consolidated network access control policy configuration and management for managed and guest users can be done through the Symantec Endpoint Protection Manager. An integrated, dissolvable on-demand client for guest user access can now be delivered directly from the Symantec Network Access Control Enforcer appliance in Gateway or DHCP modes to simplify deployment. The on-demand client performs predefined checks to ensure that antivirus, antispyware, firewall, and service pack software is installed and upto-date. Symantec Network Access Control also supports authentication and identitybased access control for guest users by offering a new Web login that can be enabled as part of the on-demand client download process. Users can be authenticated against

■ A trio of UTM systems from **ZyXEL** seeks to offer SMEs with 10 to 300 employees hardware-based security with enterprise features. The ZyWall USG100, USG200, and USG1000 come with the usual antivirus,

logins centrally stored in ActiveDirectory,

LDAP, or RADIUS or logins stored locally

on the Enforcer. Furthermore, enhanced

MAC address authentication functionality

enforces network access for unmanaged

devices in 802.1x-enabled environments.

firewall, antispam, and VPN (hybrid SSL and IPsec) features. The family boasts a user-aware policy engine, 3G support, high network availability, an IDS, and resource allocation for VoIP.

STORAGE

■ AIC (Advanced Industrial Computer) has released the G-Series SAS/SATA storage server chassis product line. It includes a redundant power supply that reduces consumption by 50% to promote cost savings. SPGC pre-plated steel materials and tool-less parts enable efficient installation times and improve the overall green state of the system. Additionally, AIC's line offers a hot-swappable rear OS drive option. "With the toolless design and high-efficiency power supply, the G-Series is not only good for the environment but good for our customer's production costs, as well," according to Gene Lee, corporate vice president of AIC.

■ IBM announced it has released a suite of integrated data protection solutions. Designed for enterprises of any size, the Tivoli Storage Manager FastBack software features full continuity and data recovery for data centers as well as remote offices. Continuous data protection covers Microsoft Exchange, Microsoft SQL, Lotus Domino, Oracle, DB2, and Windows file servers. IT administrators can improve Recovery Point Objectives and Recovery Time Objectives in multiple service levels. Instantaneous restore capabilities recover data in the background. The Tivoli Storage

Manager FastBack Bare Machine backs up

email attachments, contacts, and calendars

with its intuitive interface. The Fastback

Center packages all three components in

one: FastBack for continuous data management, FastBack for Microsoft Exchange, and FastBack for Bare Machine.

. . . .

- McAfee and MXI Security will join forces to provide government organizations with secure, portable devices backed by enterprise risk management software. McAfee will deliver the McAfee Zero Footprint Bio device and the McAfee Encrypted Hard Disk to government customers. The McAfee devices are based on MXI Security's Stealth MXP, the first-ever FIPS 140-2 Level 2-validated portable security device, and its Outbacker MXP hard drive device. Both companies will offer the public sector centrally controlled management software through McAfee Encrypted USB Manager and MXI Security's ACCESS Enterprise software suite. MXI Security provides enterprise-class devices that combine secure storage with corporate identity and access management services. McAfee Encrypted USB is easy to manage and protected by strong multifactor biometric and password authentication, with 256-bit AES hardware-based encryption. McAfee Encrypted USB is the only biometric device that holds a FIPS 140-2 validation certificate.
- The MobileNAS MN4L+ from Sans Digital is a 4-bay NAS that also can be connected as DAS using iSCSI. The tower-like storage system supports the latest SATA drives and RAID types 1/0/5/6. It is expandable via eSATA, USB, and FireWire 400 and offers hot swapping, snapshot scheduling, and folder replication among NASes in real time. The MN4L+ comes in silver or black (MN4L+B) and is powered by 512MB of RAM and an Intel Pentium M processor.

SECURITY June 27, 2008

Computrace

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As BUSINESSES OF every type and size go more and more mobile, an important need arises: keeping all those mobile devices secure. Computrace Mobile from Absolute Software offers IT asset management and remote data delete software to address these needs. Based on Absolute's Computrace

technology for desktops and laptops, Computrace Mobile provides companies with central management capabilities

for their handheld mobile population.

With Computrace Mobile installed on a device, IT administrators can remotely delete all or selected files, which helps

prevent sensitive data from falling into

the wrong hands and meets compliance standards. Admins can do all of this through a single interface. Further assistance is available through Absolute Software's Customer Center.

Once the Computrace Agent (the technology that "calls home" if a device is lost or stolen) is installed on a device, users can customize reports or

select from any of the preconfigured ones to glean information on hardware, configuration, user profile, and installed software. From the password-protected Computrace control panel installed on the device, users can force a test call; view the time, type, and success of the test call; view ESN; view version information; and change the password.

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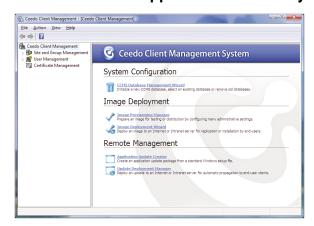
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addition, Ceedo Enterprise offers users the ability to customize their workspace through their own applications and plug-ins. This process does not require administrator involvement, the workspace is separate from the computer, and the installation of applications onto a Ceedo workspace can be done without packaging.

With Ceedo Enterprise, IT managers can control enter-

prise applications, install new software, and update user files right away from a remote location. Ceedo can be installed on a USB device in order for installed applications to become portable for use on any PC running Windows 2000/XP/Vista, or it can be deployed in real time to a PC from a network or from the Web.

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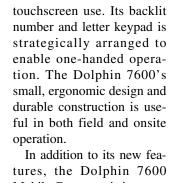
MOBILITY IS A MUST for business professionals. To access important data at any time is invaluable, which is why Honeywell Imaging and Mobility equipped its Dolphin 7600 Mobile Computer with GSM wireless technology and Microsoft's Windows Mobile 6.

With GSM wireless technology, the Dolphin 7600 allows users to stay connected no matter where they are. Wireless Full Area Networking, combined with

Bluetooth, 802.11, and GSM/GPRS EDGE, enables real-time data exchange and voice communications onsite or offsite.

The addition of Windows Mobile 6 enables users to be productive while they're traveling, with connections to email, calendars, and contacts. Windows Mobile 6 also has the ability to read and create Word and Excel files, as well as view PowerPoint presentations. The familiarity of a Windows operating system makes mobile computing simple and intuitive.

The Dolphin 7600 uses a 2.8-inch VGA color display for both viewing and



In addition to its new features, the Dolphin 7600 Mobile Computer is integrated with Adaptus Imaging Technology 5.0, which allows users to capture a wide array of data such as bar-

JUNE 20, 2008

codes, digital images, and signatures. This feature is especially useful for retail, parcel and postal delivery, field services, and task management applications.

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5U Server - ASA5241i

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2U Server - ASA2121i

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8U Server - ASA8421i

1 CPU, Intel Quad Core Xeon 5310, 1.6GHz 8MB 1GB (2X512MB) 667MHz FBDIMM Installed, 2X 80GB SATA II 7200 RPM OS drives Installed 20TB (40X 500GB) SATA II Installed, Max - 40TB. 2X 12 Port & 1X 16 Port RAID Controller Installed. 8U Rackmount Chassis, 1300Watt Redundant PS. 42 Drive bay, Rails Included. Price Starting at: \$12735/-



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OPINIONS

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JAMES DUIN

James Quin is a senior research analyst

specializing in IT security services. Quin holds

a B.A., an Honors B.Sc., and an M.Sc. from the

with Info-Tech Research Group. Quin has

worked in the IT field for more than 10 years,

Companies That Lose Our Data Don't Deserve Our Business

On Feb. 27, 2008, the Bank of New York Mellon shipped a tape containing the personal information of more than 4.5 million clients to an Archive America offsite storage facility. That tape never arrived. The information contained on the tape included (among other things) names, birthdates, and Social Security numbers—exactly the information desired by identity thieves. Even though the information contained on the tape was clearly of an extremely sensitive nature, encryption was not used. Loss of the tape was not reported until almost a month later, and it has yet to be recovered. Although Archive America lost the tape, BNY Mel-

lon is in the news because the data was entrusted to BNY Mellon by its customers in the first place.

While this is the most serious data breach so far in 2008, it is by no means the only one. According to PrivacyRights .org, through the end of May, there have been 155 acknowledged data breaches of customer data of one kind or another. Some, such as the BNY Mellon incident, involve

tape loss, while others occurred as a result of laptop theft/loss, server theft, or inappropriate posting of sensitive data to public access areas. In almost all cases, the data that has gone missing has included Social Security numbers, credit/debit card numbers, or both.

A Business Dilemma

In light of this information, I'm left to ask myself the question: "Why do these companies deserve our business?"

None of the organizations listed on the Privacy Rights Clearinghouse Chronology of Data Breaches is blameless because none took appropriate care to protect client information. Had they taken sufficient measures, none of these breaches would have occurred after all. These incidents are not cases of crack cybercriminals breaking into rigorously protected facilities to steal intel-

exposed the sensitive data to greater threat. All, however, have erred with information that they were entrusted to keep safe.

In light of this, why, as a consumer living in a market society where choice abounds, would you give your business to, and share your personal information with, an organization that has shown a disregard for the value or sensitivity of that data? As a business in the same society, why would you engage with partners who are unable to conduct their daily affairs with appropriate comportment? This is not a case where we should consider giving them a break because bad things can happen to good people. These businesses have failed in

their covenant with their clients to provide appropriate protection. And if they fail in that covenant once, what guarantees do we have that they won't fail again in the future?

Taking Business Elsewhere

Simply and bluntly put, any business that has suffered a data breach should be boycotted until it can reasonably demonstrate that it has

taken the necessary steps to correct whatever problem led to the breach. The business must also implement controls to ensure that it doesn't happen again. And taking the company's word for it that the problems

have been fixed is by no means good enough. The demonstration must come from an independent third party that signs off on the adjustments and enhancements.

The truly mind-boggling aspect of this situation is that businesses don't take appropriate steps of their own volition; data breaches cost big money. For example, last year's breach of TJX customer data is expected to cost in excess of \$600 million by the time everything is said and done, and that's not including lost revenue as a result of decreased customer confidence. As is indicated by the 155 and counting breaches so far in 2008, however, a large number of businesses don't take the necessary steps and don't put adequate controls in place.

While it would be ideal for the government to put sufficiently punitive legislation in place to limit these breaches, the fact of the matter is that the complications with such legislation would just be too complex and overwhelming. The next best thing would be for businesses to make the choice themselves to do the right thing. And while many do, the ongoing litany of breaches is pretty indicative that too high a number don't.

That leaves us, the consumers, with no recourse but ourselves. The power to correct this problem lies with each one of us, whether as an individual or as a representative of a business. We can make our opinions heard with the dollars we don't spend. Maybe, if enough of us move our spending away from lackadaisical businesses, they will change the way they operate, and data breaches won't always be such a big problem.

Send your comments to infotech@processor.com



lectual property or military secrets. They are all cases of companies and/or employees being lazy, forgetful, or just plain dumb. Clearly, some of these businesses are more at fault than others because they

University of Toronto.



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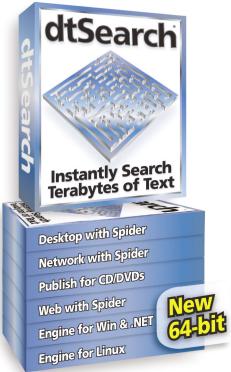
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Email Archival

Finding A Solution You Can Trust

by Don Reisinger

As the use of email as evidence in legal proceedings increases, more companies are relying on email archiving to help manage legal risks. And although there are a variety of options available, including do-it-your-self packages, backup tapes, and host-ed/SaaS packages, there's no one solution for finding the best way to save and maintain emails for the enterprise. Backup tapes, for example, don't maintain copies of emails exchanged between backups or retain copies of emails deleted by users after the backup is replaced with a newer one.

However, with the help of email archiving programs, some of the issues surrounding the retention of emails can be eschewed, and companies will be able to find peace in

Shopping List

The hunt for an email archiving solution can be overwhelming—unless you know what you're looking for. Here is a list of some features to consider in an archiving program:

- The ability to archive, index, retrieve, and monitor email messages
- Policy-driven, real-time notifications of compliance
- · Verified integrity of archived messages
- A rich user interface to make archiving easier
- Solid encryption

knowing that the important information flowing back and forth from emails will be kept in a safe place.

The Importance Of Email Archival

As Dean Richardson, vice president of sales at ArcMail Technology (888/790-9252; www.arcmail.com), explains, there are two major drivers for email archiving: compliance and email management.

"From a compliance or discovery perspective, one should be aware that email always has at least two parties," Richardson explains. "Unlike paper documents, where it is easy to control distribution and destruction, email tends to linger, so one should always assume there is a copy of any given email, whether it is on a backup tape somewhere, on a file server, [or] on someone's desktop.

"This is problematic from a discovery point of view because it is incredibly expensive to perform a thorough discovery—one has to look in all these places for the possible existence of emails relevant to the discovery order. A good archive system preindexes and stores all email messages in one system, allowing the appropriate people to search across the entire organization's email system by sender, recipient, subject, attachment name, date range, and full text within email bodies and attachments in seconds."

From an email management point of view, archiving can help reduce the load and storage requirements on mail servers, thus increasing performance, reducing backup times, and quite often letting IT managers defer server upgrades. And by moving away from mailbox size restrictions, which require email deletion or moving, companies are better equipped to confront the significant demands surrounding email management.

"Implementing an archive system allows the administrators to configure a 'timebased' retention policy on the mail server, keeping only recent emails (one or more years) on the mail server, while still allowing users and administrators access to all email through the archive system," Richardson contends.

According to Kieron Dowling, president and CEO of Jatheon Technologies (www .jatheon.com), "[An] email archive index makes it much easier to retrieve an email because IT staff—and in some cases, end users—can search on parameters such as sender, recipient, subject line, date sent, etc. With backup tape, users have no corresponding search capability and must instead manually search for email."

Features To Look For

There is a series of important elements that companies in the market for an email archiving solution should look for to help ensure that they get the right functionality to fit their needs and that they get what they pay for.

As Dowling points out, "An email archiving solution must automatically store, index, and retrieve individual email messages and file attachments in real time. All inbound, outbound, and internal emails must be archived, regardless of how long they live on the email server, and [you should] ensure that the system is a true archive solution and not a backup."

He continues, "SMBs and enterprise organizations need a cost-effective email archiving solution that is both powerful and simple—simple to deploy, simple to manage, and simple to use."

Realizing that, most IT managers should be aware that there are a number of options available that faithfully succeed in achieving each of those goals. But unfortunately, not all are created equal, and so each IT manager needs to be aware that certain components are especially important.

And according to Dowling, the list can be quite big: A good email archiving program includes the ability to "archive, index, retrieve, and dynamically monitor email and instant messages; send policy-driven, realtime notifications of compliance or governance infractions; verify the integrity of archived messages to ensure they have not been edited or otherwise altered; give end users, compliance officers, and systems administrators a rich user interface, as well as various email client plug-ins; work with Microsoft Exchange, Novell GroupWise, [and] Lotus Notes, as well as outsourced mail services; work with enterprise encryption technologies; [and] be implemented in hours instead of weeks."

Richardson adds that IT managers must "shop around, get references, and be careful when choosing a product that is both new and relatively untested."

The Right Fit

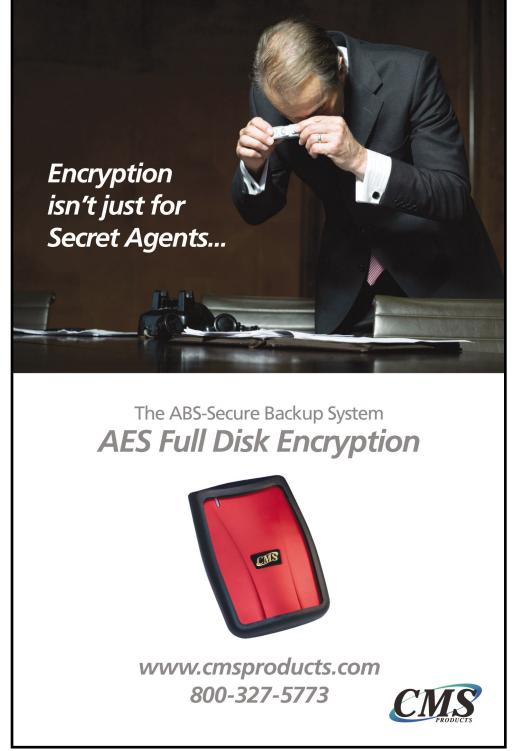
In the email archiving space, compliance and security are usually held in the highest regard, but sometimes that's not always the most important concern. As Richardson says, it's easy for IT managers to use a product that doesn't offer the kind of functionality that should be expected of an archiving program and instead choose it for the sake of bottom-line concerns or assumed practicality.

In the end, using email archiving programs is very much an individual company's decision, and not every solution will be best for every company. But as compliance concerns become more important and IT managers are tasked with the need to ensure their companies' safety, rest assured that email archiving solutions will become more ubiquitous and a key component in any business.

And as the reliance on email continues—many analysts expect corporate email traffic to double by 2009 from 64.9 billion to 120 billion messages a day—so, too, will the reliance on archiving solutions.



PROCESSOR.



The "Business" iPhone

How Does Apple's 3G iPhone Affect The SME Network?

by Kurt Marko

APPLE'S SECOND-GENERATION IPHONE, the 3G, launched with a bang, selling 1 million units worldwide in its first weekend. With analysts projecting total sales of more than 10 million this year, there is a good chance they will start popping up in the enterprise.

What makes the iPhone different from and more challenging than—other smartphones is its Web integration and its ability to seamlessly roam between 3G cellular networks and Wi-Fi LANs. In fact, it's deceptive to even call the iPhone a phone; as David Messina, vice president of marketing at Xangati (www.xangati.com), sees it, "The iPhone is really a new type of device." Whereas traditional smartphones such as the BlackBerry rely on the cellular data network and service provider's application infrastructure, Messina notes that the iPhone is a full participant on LANs and will actively seek out faster Wi-Fi connections in preference to slower cellular networks. Indeed, Carl Howe, director of Enterprise Software Research at Yankee Group, finds that from an IT and networking perspective, the iPhone looks more like a laptop client than a phone, calling it "a first-class member of the network."

Many IT managers are undoubtedly wondering what effect, if any, iPhone usage will have on their staff and networks and what posture they should adopt—whether formal support, passive acceptance, or outright hostility—with respect to employee iPhone usage. According to Messina, "The iPhone blurs the line between a business and consumer device." However, the latest 3G model has been informally termed the "business iPhone" by many due to the many new enterprise features. While the iPhone 3G is certainly ready for business, there are things IT should know and do to prepare for its arrival.

Enterprise Features

The iPhone has a long list of features targeting business users (see the "3G iPhone's Business-Class Capabilities" sidebar for more information), but the centerpieces are its rich email client and its full-featured (or what Apple terms "desktop-class") Web browser. While the email client may not sway dedicated BlackBerry aficionados, the iPhone's Safari browser sets a new standard for the handheld Web experience.

The second-generation 3G model adds two significant features targeted squarely at IT departments: so-called push email (in which new messages are immediately transferred from a mail server without any client polling) and VPN support. The iPhone implements encrypted push email via Microsoft's ActiveSync, and while In-Stat Principal Analyst Bill Hughes says this isn't a product differentiator and merely puts the iPhone on par with other business-class smartphones, it's still a feature Exchange users have demanded.

3G iPhone's Business-Class Capabilities

Touted as the "business" iPhone, Apple's second-generation release offers many new business-oriented features. Here's a list of some notable capabilities.

- Rich HTML email plus the ability to view Microsoft Word, Excel, and PowerPoint; PDF;
 JPEG; and iWork attachments
- Calendar fully integrated with contact list
- Powerful contact manager with support for vCards and corporate Global Address Lists
- Microsoft Exchange ActiveSync support provides secure (SSL-encrypted) push email, contacts, and calendar to keep iPhone synchronized with corporate Exchange servers
- IMAP support for non-Exchange, non-Web email systems

- Full-featured, PC-class Safari Web browser.
- Support for secure networking protocols, including SSL, IPSec VPN, and WPA2 along with 802.1x authentication for Wi-Fi
- Support for custom enterprise applications using the iPhone SDK
- Central management and control: The iPhone Configuration Web Utility allows IT to set configurations, settings, and passcode policies and preinstall certificates for authentication to VPNs or 802.1x networks.
- Remote Wipe capability allows IT to remotely remove all data and configuration information from a lost iPhone, which is then securely erased and restored to original factory settings

Source: Apple

The iPhone implements encrypted VPN connections using Cisco IPSec, L2TP/IPSec, or PPTP. VPN authentication can use a variety of methods including X.509 certificates, two-factor tokens such as SecurID or CRYPTOCard, shared secrets, or simple usernames and passwords. While Apple touts the iPhone's ability to integrate with most existing VPN networks, Messina cautions that adding any new devices or clients to a VPN deployment can be tricky and that IT departments should understand the nuances of the iPhone's VPN implementation before giving the OK to end users. User support may be an added challenge because Messina believes the iPhone will likely open up remote network access to a new audience that may not have previous experience with VPN concepts or connection software.

Another key enterprise feature of the iPhone 3G according to Howe is the ability to perform remote configuration and deactivation. Smartphones, particularly those such as the iPhone that can read Microsoft Office files, often contain a lot of sensitive company information while being maddeningly easy to lose. So-called remote wipe, controlled via the Exchange ActiveSync Mobile Administration Web tool, enables IT administrators to remotely remove all data and configuration information from the iPhone and then restore the device to its original factory settings. Apple has also released an iPhone Configuration Utility that can be used to create and install configuration profiles and capture certain device information, including console logs. Howe advises IT departments that formally support the iPhone to become familiar with these management tools because they not only can enhance security but also simplify device deployment and compliance with corporate policies.

iPhone On The Corporate Network

Despite—and perhaps because of—the iPhone's powerful features, its arrival

won't be greeted with toasts and cheers by some IT managers because it has the potential to create substantial additional network traffic, much of it not business-related. The convergence of consumer and business features, along with its vaunted ease of use, make it just as easy to check your corporate email or calendar as to download songs or TV shows from iTunes. With the iTunes icon prominently displayed on its home screen, Messina cautions that the iPhone almost begs users to download audio and video content. With an average song running 5 to 10MB and each minute of TVquality video weighing in at 4.7MB, a couple of iPhones can easily saturate a WAN link and even cause noticeable performance degradation on local Wi-Fi networks.

Messina points out that despite its 3G capabilities, in order to maximize performance, the iPhone always connects to a Wi-Fi network if available; thus, he feels IT departments need to have real-time network monitoring capabilities to identify all devices on their networks, how much traffic they are generating, and where that traffic is going (that is, whether it's business-related or personal). Hughes is more insouciant about the iPhone's effect on networks, saying that while he can envision scenarios where it might create problems, the more critical issue is how employees are using the device. IT needs to ensure employees utilize the network appropriately, he says: "If they're doing company research on their laptops but checking sports scores on the iPhone, it's a bad investment."

According to Howe, the iPhone "has set a new standard" for mobile computing devices and has certainly raised the bar for future smartphones. Given the buying frenzy surrounding the initial release, it's likely iPhones will be popping up on most enterprise networks. Yet IT managers need not dread the iPhone invasion. Those wishing to actively manage their iPhone usage will find tools available to exert substantial control, while those taking a passive approach can still rely on network monitoring software to assess the impact of iPhones on their infrastructure.

Using The iPhone With VPNs: A Deployment Scenario

Here is a step-by-step breakdown of how an iPhone works with a VPN:

- The iPhone requests access to network services (typically over a PPP connection).
- The VPN server/concentrator receives the request and then passes the request to the authentication server.
- 3. In a two-factor token environment, the authentication server would then manage a
- time-synchronized token key generation with the key server. If a certificate or a password method is deployed, the authentication process proceeds with user validation.
- Once a user is authenticated, the authentication server validates user and group network access policies. The VPN server then provides tunneled and encrypted access to network services (typically via IPSec).

SOURCE: "IPHONE IN THE ENTERPRISE"; APPLE INC.; JULY 2008.

STORAGE June 20, 2008

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Testing Storage System Performance

You're Closer To Your Data Than You Think

by Chris A. MacKinnon

BECAUSE DATA IS A HOT COMMODITY in any small to midsized enterprise, it's important to keep it in a safe, reliable place. When looking for the right storage solution for the enterprise, there is sometimes a tendency to lean toward the most up-to-date storage system on the market. But what if the enterprise isn't actively testing the performance of that system after it's in place? If this is the case, then "up-to-date" translates into wasted resources on multiple levels. So how can enterprises accurately evaluate, track, and plan storage system performance? Why are these jobs even necessary, and what processes should enterprises have in place?

Analyze This

With regard to the evaluation, tracking, and planning question, Roger Kasten, a storage evangelist for the Engenio Storage Group at LSI (www.lsi.com), says that although this question appears simple, it often tends to be one of the more complex issues customers face. He says with everincreasing energy costs, storage system performance has never been more critical and that "an evaluation of storage performance really boils down to an issue of storage system efficiency. Which system can do more with fewer hardware assets? If a storage system has significant performance efficiency, then issues such as performance planning tend to be less critical."

For example, Kasten explains, "If [one] system is able to deliver 1,300MBps with only 60 drives, while a second system

achieves 1,300MBps yet requires 112 drives, then the issue of performance planning may be lessened on the first system since the users will achieve massive performance with relatively few storage assets." He says the odds of possessing sufficient performance favor the first system due to its extreme efficiency, while the odds of sufficient performance for the second system are significantly lower. "The owners of the second system will be required to exercise much greater tracking and planning. This is one of the ways that high-efficiency, high-performance systems enable easier usage by lessening the amount of tracking and planning that is necessary."

Lucas Welch, spokesperson for Isilon Systems (www.isilon.com), says that, in general, enterprise businesses should evaluate, track, and plan storage system perforand user patterns to ensure performance scales in accordance to your needs and usage patterns. Test again and again until the performance data is robust enough to assess from a historical perspective and determine if it meets expectations." Welch says after a test period is complete, enterprise IT departments can then make an informed and educated decision on which storage system to purchase.

Balancing Act

workflow requirements.

In Kasten's opinion, many users find it tricky to balance performance. He explains, "For the overwhelming majority of users, it's important to seek out a storage system that delivers balanced performance. There are many systems that are able to deliver pretty good throughput (MBps), while other systems are able to deliver

In general, enterprises should evaluate, track, and plan storage system performance based on their unique environmental and

mance based on their unique environmental and workflow requirements. He says this can be done through a variety of industrystandard performance metrics.

According to Welch, "The key is to analyze any prospective storage system's performance through an evaluation period before purchasing the product. Run the exact applications and processes planned for actual deployment and production on the test system and track the performance, specifically concurrent throughput. Run different applications, data combinations,

very good random performance (IOps). What may be surprising, though, is that very few systems do a great job of delivering high levels of both IOps and MBps. Delivering balanced processing performance can help reduce the amount of tracking and planning storage administrators are required to perform. It won't eliminate it, but it will help lessen it."

As an example, Kasten says many companies focus on obtaining a system that can deliver maximum IOps for their database usage. While this appears to be a no-brainer, Kasten says it is actually a trap. He comments, "Many companies require a storage system with a very good IOps engine for use during the business day, but they fail to bear in mind that oftentimes the performance requirements completely change after traditional business hours are over. Numerous users suddenly discover as they switch over to data mining operations they suddenly have a need for heavy sequential performance (MBps)."

According to Kasten, when this type of scenario occurs, it is interesting to note how many users are startled to discover that while just hours ago, their database was dependent upon random (IOps)

Throughput Equals Performance

Lucas Welch, spokesperson for Isilon Systems (www.isilon.com), says on an ongoing basis, tracking performance is important to ensure that workflow and users are adequately supported and that you are maximizing your data center's resources, such as networking connections, power, and data access. He notes, "Using the data and results gathered during your evaluation of the system, track performance against these numbers to ensure the system is performing as needed. If there is unforeseen downtime or interruption on the network, there may be a problem with the system's performance. When dealing with unstructured and file-based data, using throughput as the measuring stick, rather than IOps, is a more accurate assessment of performance."

performance, it is now dependent on sequential (MBps) performance. "A storage system capable of delivering balanced performance can greatly ease some of the planning that is required for unbalanced systems," Kasten says.

Process Matters

So where can IT and data center managers begin? For starters, Kasten says a performance monitoring tool can greatly assist customers. "However," he notes, "these tools tend to vary in usefulness. They can also be quite expensive. Many storage companies provide free performance tools as part of their basic management. The tools can be used to assist in planning. In addition, many storage vendors provide sizing tools for various applications such as Exchange, Oracle, and VMware. A number of third-party tools exist to help facilitate planning."

Kasten says IT and data center managers can talk to storage providers and request any tools they may offer that will directly address their application sizing requirements. He adds, "While many vendors may have these tools, it is also critical to understand where those various vendors' systems have bottlenecks. For instance, a vendor may have excellent Exchange sizing tools. They may also have good sizing tools for Oracle. However, a little investigation may reveal they do not possess sufficient performance to handle both applications on the same storage system." He says companies should create a hit list of major applications and work with storage vendors to determine if the system they are considering will turn out to be a blessing or a curse.

So before you buy that state-of-the-art storage system, make sure you get your analysis, balance, and process ducks in a row. It's one thing to have your data where you want it; it's another to have it at your fingertips.

QoS In Times Of Low Performance

According to Roger Kasten, storage evangelist for the Engenio Storage Group at LSI (www .lsi.com), "One way in which lower-efficiency, lower-performing systems may endeavor to lessen the amount of tracking and planning users must carry out is by implementing QoS (Quality of Service) capabilities. There is absolutely nothing wrong with QoS. In the right hands, it can be an excellent tool. However, what many people fail to understand is many QoS systems achieve their objective[s] by throttling the performance of

all but one or two data pools. They enable a user to choose a primary application and data set which remain unfettered while they then implement performance throttling on all remaining applications and data sets. In this manner, they are able to deliver maximum performance for a given application but do so by potentially sacrificing the performance of all remaining applications. The more powerful a storage system is, the less critical QoS often tends to be.

SECURITY June 20, 2008

Network Monitoring For SMEs & Beyond

Ipswitch's WhatsUp Gold Version 12 Gets Bigger & Better

BUSINESSES GROW CONSTANTLY, and networks must adjust to changing demands. Yet, as important as it is for a network to be able to scale upward, every company has to start somewhere. Having network management tools that can grow with a business from a small enterprise to a large one is valuable.

WhatsUp Gold from Ipswitch has been addressing this issue for over 15 years. The most recent version, WhatsUp Gold 12, has added several new features, including Split Second Graphs, which allow administrators to more quickly identify any problems and take proactive steps toward resolving issues—in seconds,

not minutes. Additionally, real-time data can be added to full reports to give administrators a more complete picture of network health, which is continuously updated as real-time information flows in.

Through the various workspace views, administrators can see current device usage data via the InstantInfo pop-ups feature just by hover-

ing the cursor over device or network interface links. Also new are the Web Task Manager and Web Performance Monitor, Web-based tools that extend the functionality of Windows tools to every user.

WhatsUp Gold is designed to provide easy-to-use management and monitoring

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SIX QUICK TIPS

Is Your Network Ready For VoIP?

Tips To Help Smooth The Path To Voice Over IP

by Drew Robb

THE CONFIDENT PREDICTIONS of analysts with regard to business usage of VoIP (Voice over Internet Protocol) were well off the mark. Seven years ago, for instance, one analyst stated that 90% of SMEs would be using VoIP within five years. Even though the current figure is somewhere around a third of that level, more and more small and midsized enterprises are now looking closely at VoIP.

The big question for those seriously considering the transition is whether the network is up to the task. After all, one of the touted advantages is that you no longer need a voice network running on phone lines and a data network running on Ethernet. You can double them up on Ethernet. Doing so, however, may mean bandwidth overload, spotty voice quality, and other problems. So it's wise to analyze your existing network infrastructure before making the move and plan it all out with care and precision.

Plan Carefully

Before implementing a VoIP network, take all the necessary precautions. First and foremost, research VoIP providers. As well as price and special features, find out if that provider is used to dealing with businesses. Simple giveaways on the Web site would be if there are no pages dealing with business adoption or no separate business prices.

"The best transformations take place with extensive planning," says Christopher Thompson, senior director for solutions marketing at Cisco Unified Communications (www.cisco.com). "The area most often overlooked is to take an inventory of the workspaces and the network infrastructure. This inventory serves as the foundation for the planning and change management process that will be critical to the migration."

Thompson points out that VoIP implementation failures usually happen when IT fails to fully understand the employee workspace—that is, the set of devices, networks, and business applications that an employee uses throughout the day to get the job done. Understanding how VoIP and associated new applications integrate into the workspace is the key to making sure that the right people have access to the required tools.

Consider The Various Options

When an SME is planning to move to VoIP, it has to take into account what method would best meet its needs. IT departments can develop a VoIP architecture several different ways, including:

- By IP-enabling an existing telephony network
- By voice-enabling an existing IP or other packet network
- By building a pure IP telephony network from scratch

The choice will vary depending on existing circumstances. One way to assure service quality, for instance, is to put in two complete LANs, one for voice and one for data. But that means two sets of routers/ wiring paths and extra costs. During the

planning stages and in discussion with vendors, therefore, discuss these options to see which best fits your needs in terms of services, voice quality, and budget.

"Regardless of how you arrive at a VoIP architecture, the end result is the same," says Alex Pierson, general manager of enterprise multimedia systems at Nortel. "Whether your network is a pure IP network or you use other existing packet infrastructure, the architecture will have several elements in common."

Test, Test, Test

You can't expect to have great phone service without properly testing everything. If you run into a problem during implementation, the tendency might be to add more switches or bulk up the bandwidth. Yet testing can sometimes demonstrate that the network doesn't need to be beefed up; the problem may lie elsewhere, such as in the sphere of applications.

"Comprehensive testing takes the uncertainty out of VoIP deployments by enabling data centers to determine how much traffic their network can handle without degrading voice quality," says Charles Ciarlo, CEO of workforce management vendor Left Bank Solutions (www.leftbanksolutions.com). "Testing will also locate configuration errors in networks and VoIP equipment, detect and troubleshoot interoperability issues, isolate performance bottlenecks, and tune speech applications for best performance."

Obviously, it's better to go to great lengths to find and fix problems in predeployment testing than to discover them in production. But that takes time, so don't be in too much of a hurry.

"Have patience when rolling out VoIP," says Michael Patterson, CEO of network monitoring vendor Plixer International (www.plixer.com). "As well as comprehensive testing, talk to users and learn how they like to use the phone and the features they use a lot, such as call waiting, call transferring, and voicemail."

Stepped Roll-out

Patterson emphasizes that SMEs should avoid a big all-at-once deployment. With a stepped roll-out, you can test VoIP without completely switching the entire company

Best Tip:

Manage Expectations

Expectation management is huge when implementing a VoIP network. It is simply unrealistic to expect a new phone system to be 100% perfect from day one. After all, when you are dealing with a vital organ of the business, it won't necessarily be perfectly smooth sailing.

"Let management know that replacing a phone system is the same thing as having open-heart surgery on their business," says Chris Lyman, CEO of VoIP phone system provider Fonality (www.fonality.com). "Yes, they are going to feel better long-term, but right after surgery there may be some bumps. Many business owners assume a phone system is like a desk. Move it in, and all is well. Not so. A phone system is a complex communications system and takes some patience to install and adapt."

Smart Tip:

Understand The Elements Involved

Several technologies and components are common to most VoIP setups. It is wise to obtain a clear idea of what each element consists of. These include:

- Communication server: The brains of the network, providing call control, gateway control, service intelligence, and other centralized functions; also called a "call server" or "soft switch"
- Signaling point: Enables the VoIP network to communicate with traditional phone networks
- Line and trunk gateways: Provides connectivity to the public network
- Core switches and routers: Keep traffic moving through the core of the IP network
- Application server: Provides voice, data, or multimedia services from a central location in the IP network.

from landlines to VoIP. That provides a safety net; if VoIP isn't functioning properly, you have the old phone system as a backup.

"Move a few savvy players to VoIP first to test the waters," says Patterson. "Choose people who ideally volunteer to try the technology and consider leaving them with the traditional phone for calls they don't want to risk with a new VoIP solution. Volunteers tend to be more helpful when troubleshooting and working toward a close-to-perfected solution."

BONUS TIPS

- Remember the importance of basic training. What's the point of having a shiny new VoIP network if employees can't even put someone on hold? Don't forget to budget for some basic training. Proper training will not only make the system usable, it will heighten return on investment by educating users on the many advanced features that are available.
- Upgrade routers and switches. You don't always need to upgrade hardware when you move to VoIP. But if your small to mediumsized enterprise is still working on aging 10Mbps hubs, it would be a good idea to move up, at least to 100Mbps switches.

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WHAT'S HAPPENING

Automate It All

GDCM Helps You Make The Most Of Your IT Investments

by Julie Sartain

MANAGING HARDWARE, networking, storage, space, capacity, power, and cooling is enough of a challenge without worrying about how to decrease redundancy and actively forecast and plan the deployment of all IT assets. What if there was a way to provide an automated view of all these areas (both physical and virtual), plus a Web-based GUI that's both user-friendly and attractive?

GDCM (Global DataCenter Management) has tackled this challenge and created some amazing solutions, one of which is a sophisticated environmental and strategic management system. The company's plan was to develop a reporting and business intelligence functionality that could determine how infrastructure and IT assets combine to provide both a physical and virtual data center. But it also had to include end-to-end mapping to provide a complete view across the infrastructure.

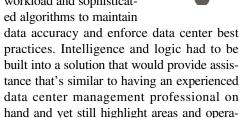
Delivering Automated Intelligence

It all started when Lee Moreton and Robert Neave, co-founders of GDCM, realized that a software application was desperately needed to support the total data center infrastructure environment. "At the time," says Daniel Tautges, president of GDCM USA (www.gdcm.com), located in Del Mar, Calif., "the risk to business productivity was becoming greater, along with the reliance on data center equipment and the increasing demands for measurable services delivery."

When GDCM reviewed the available products in the marketplace, the team real-

ized that others had attempted to address this issue using drawing tools linked to databases but with limited benefits. "We felt that this top-down picture approach to the problem was wrong and would always provide limited benefits to the increasing and changing issues of data center management," he says.

A system had to be designed that would quickly and easily achieve powerful processes such as automation to reduce user workload and sophisticated algorithms to maintain



tions that could lead to issues either now or

R&D Challenges & Solutions

in the future.

At the end of 2003, GDCM started its plan for a solution that was developed on a modular, scalable architecture able to be easily integrated, notes Tautges. "We faced a number of challenges that would set the underlying scope for the whole development."

The first challenge was how to break the problem down into smaller components that could each add business benefits to address today's problems with the scalability to address tomorrow's unknown problems, all while enabling the company to hit the market with a competitive product. The second obstacle was the most challenging at the time: deciding what technology to use.

First, the team identified all of the elements they would need to manage using the system servers, applications, racks, tasks, and workflows and then proceeded to put these into groups in line with the business units that would be using the system. Next, they went through each group prioritizing the business value from each element to that business group and then identified a basic scheme and its modules for a product solution.

"We started by assembling a small team of developers to produce a prototype product that demonstrated the necessary features," says Tautges. "We then went to a number of prospects in the market to gather feed-

back and determine if we were on the right track."

After the success of this project, GDCM increased the development team and started

commercial development. This process involved taking each of the defined modules and their subsets of functions and then breaking each of those functions down into smaller sets of business rules and testing the impacts of one function to another. The best example of this challenge was the automated capacity management of the servers' racks when items were added. The development team had to solve the problem of a drag-and-drop interface within Macromedia Flash (v4) linking to Microsoft .NET and storing the capacities consumed by the item within the rack while working within the constraints/rules that had been set for the rack and each item type.

Project Results & Future Plans

The resulting solution is a product called nlyte, which provides functionality focused on automation and optimization of elements such as heat, cooling, power, and space, as well as extensive relationship mapping. It also has a centralized configuration management application that's

designed to integrate with existing data center equipment and centralize disparate systems into one application, adds Tautges.

"nlyte is built on now industry-standard technologies such as Microsoft .NET and SQL Server 2005, providing a robust, powerful, and scalable architecture that fits the requirements of any organization," says Tautges. "The user interface is built in [to] Macromedia Flash to provide a rich interactive graphical interface that enhances the user experience and provides visual representations of relationships and concepts. This intuitive design allows nlyte users to be up and running with the system in as little as two hours."

GDCM also developed a service management capability called Workflow v1.0 early on in the product life cycle. The integrated workflow application features were driven through GDCM's early customers focusing on implementing, tracking, and storing processes that could be consistently repeatable.

This year, GDCM introduced Workflow v3.0, which extended the early workflow product to leverage the Microsoft .NET development platform. "The latest product release greatly enhances the feature set to further simplify processes through a dragand-drop user interface. This allows for the easy creation and editing of new flows and ITIL/best practice templates for things like server commissioning and traditional asset life cycle management tasks," says Tautges.

Future plans for development include building on the nlyte core by increasing the level of automation for managing processes in data center operations and to seamlessly integrate with the existing software framework.

Concludes Tautges, "Our implementation approach ensures that customers are up and running in days vs. weeks without having to incur the cost and time of significant professional services. Our products are designed with a data-driven architecture vs. relying on CAD or Visio tools, which are difficult to integrate and scale."

THREE QUESTIONS

Going Virtual

Certeon Accelerates Wide-Area Application Access

by Daniel P. Dern

FOUNDED IN 2003, Certeon is known for its aCelera Virtual Appliance, an application acceleration software offering that runs as a virtual appliance running natively with a VM (virtual machine) infrastructure, such as a virtual machine within VMware ESX or Microsoft.

Gareth Taube, vice president of marketing at Certeon (781/425-5200; www.certeon.com), shares his thoughts on the company and how it is helping enterprises with geographically distributed offices, manufacturing, and other facilities work more productively and cost-effectively.

■ What are the biggest IT-related issues facing today's small to midsized enterprise?

As company locations and workforces are becoming highly distributed, IT is looking to control budget costs and infrastructure management by consolidating servers, applications, and data, often through the use of virtualization.

"Centralizing IT means that more and more remote workers have to access applications over wide-area connections, and the more they do, the more they run into congestion, latency, and bandwidth constraints," says Taube. "Large files such as CAD/CAM drawings can take minutes, even hours, to be moved, slowing work turnaround,

and wide-area access can also slow down the lookup time for online interactive activity."

The challenges of distributed systems communicating via wide-area networks become particularly painful with international communications overseas, Taube points out. "You have less flexibility with bandwidth and latency. But you also see these problems within the United States."

■ What should *Processor* readers know about your company's products?

Certeon's aCelera Virtual Appliances reduce application response time for applications being accessed over widearea links, such as between a company's data center and its branches, by more than 95%. "aCelera overcomes the inherent issues of WAN access, such as limited bandwidth, high latency and packet loss, and network contention. This results in accelerated response times for better productivity,"

"And we can do this as part of a virtualization infrastructure," he continues. "aCelera is certified by VMware as a virtual appliance—the only one certified by VMware for application acceleration—and work[s] under Microsoft Hyper-V. We're a reseller for VMware and Dell Servers, so we can provide the whole system."

Certeon's aCelera is optimized for mission-critical applications such as wide-area file services, Web-based collaboration, and enterprise content management, as well as CAD/CAM, file-sharing, and generic HTTP/HTTPS traffic. So, says Taube, "Branch office workers who drive your business will experience a significant improvement in application response and file access times."

■ What makes your company unique?

"Unlike traditional hardware-based WAN accelerators, Certeon's aCelera is software-based and can run as a virtual machine on the same server as the application it is accelerating," says Taube. "We run on standard x86 systems, so we don't add to IT's hardware footprint or add another single-purpose box that needs managing. We are the only company offering application acceleration as a virtualized appliance without using proprietary hardware."

Also unlike WAN optimization based solely on compression, Certeon's unique Application Acceleration Blueprints allows aCelera to understand application protocols and semantics with more accuracy than traditional packet compression and optimization solutions. "aCelera is application-intelligent," says Taube. "For example, we have an Application Acceleration Blueprint for the software in EMC's Documentum enterprise content management system, Oracle's E-Business Suite, Microsoft Office, and Microsoft SharePoint. We've trained aCelera to recognize the semantics and objects these applications use. By knowing what the payload is, aCelera's lookup time can be reduced."

aCelera also includes Certeon's Object Differencing Engine, which uses knowledge provided by the Application Acceleration Blueprints to significantly reduce the amount of traffic going over the network by transmitting only changes in the

Taube continues, "Because of Certeon's unique object approach to understanding the traffic, we have been also able to accelerate encrypted traffic, [such as] SSL and HTTPS traffic, without having to unencrypt."

SECURITY **JUNE 20, 2008**

Email Archiving With Data Integrity



ArcMail's Defender U3160 Improves Productivity & Reduces Strain On IT Resources

EMAIL HAS BECOME the de facto means of communicating in an office setting. Archiving all that data is important, and managing it effectively can help a company improve productivity and reduce the strain on IT resources. It's crucial to ensure data integrity so archived data can't be altered.

ArcMail Technology addresses these needs with Defender U3160, a standalone appliance with 16TB of storage that provides comprehensive archive and data management. The appliance operates seamlessly in the background. Both administrators and end users can use a simple, Web-based interface to search for and retrieve archived email data. ArcMail Defender U3160 can be used either in the office or remotely.

Admins have a variety of abilities with ArcMail Defender U3160, including being able to monitor system settings and produce reports to ensure that emails are being successfully archived. Once data has been archived, it's protected by data integrity and encryption technology

ArcMail Defender U3160 is easy to install, use, and manage and captures all inbound, outbound, and internal email with

to ensure that data that has been backed up

and subsequently restored can't be altered.

the mail server's journaling function. Operating on the Linux platform, the appliance is compatible with Microsoft Exchange, Lotus Notes, Groupwise, and other mail servers with journaling functionality.

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STORAGE JUNE 20, 2008

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THE NR6 FAMILY of RAID storage systems is the newest member of NetCom USA's storage solution offerings. Available in capacities of 2, 4, and 8TB with data transfer speeds up to 400MBps, NR6 storage systems are a fast, reliable solution for storage of mission-critical data.

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SECURITY JUNE 20, 2008

Web Security For **Every Size Of Enterprise**

Aladdin's eSafe v6.2 Proxy Expands Security Options For The eSafe Family

INTERNET-RELATED SECURITY THREATS are nothing new, but they're as dangerous as ever. Checking for Internet threats in real time is a powerful way to combat malware of every kind. Aladdin Knowledge Systems' family of eSafe products is designed to address security issues on



multiple levels. The latest addition to the arsenal is eSafe v6.2 Proxy, a Web-security application for both in-line and proxy implementation.

By virtue of its implementation options, eSafe supports virtually any network environment. Protection occurs in real time and is designed to help companies protect data, improve productivity, and enable compliance. eSafe can be deployed as a native proxy that integrates Microsoft ISA or as an in-line bridge/router, forwarding proxy, or ICAP proxy.

eSafe v6.2 Proxy is designed to inspect all HTTP, HTTPS, and FTP over HTTP traffic thoroughly to protect the network from viruses, spyware, spam, Trojans, and more. Aladdin designed eSafe v6.2 Proxy to provide complete protection, high performance, and intelligent and thorough inspection.

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The eSafe family is a flexible security package that can be installed in enterprise environments in a variety of different modes. It's designed to work transparently, checking Web activity at the gateway to avoid impacting network performance.

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April 11, 2008 Volume 30 Number 15 www.processor.com



Considering Preowned Equipment

A Data Center Doesn't Need The Newest Technology To Run With Efficiency & Productivity

by Elizabeth Millard

OLDER EQUIPMENT doesn't run as OLDER EQUIPMENT GOESTI CTUTE as a limited lifespan, and requires far more time and effort for manmore time and effort for man agement—these are just a few of the misconceptions that John Sheldon, of Network Hardware Resale (www networkhardware.com), hears from potential cus-

turers put out wrong information n some of the manufacabout preowned equipment," he says. "They're tainting their own products unnecessarily. Used equipment can last forward and to the says." ment can last forever, and you can get it for up to 75% less than new, just because it's a second-generation product."

Some companies demand no less than the cutting edge in terms of data center equipment—frequently swapping out yesterday's tech for this month's recent development. But for many enterprises, particularly small of midsized enterprises, that kind of highun doesn't make sense. Instead, a



mix of preowned and new equipment can maximize budget dollars without adding to maintenance schedules.

Maintenance Myth

It's a commonly held belief that older products require more care than new ones. After all, a car with 150,000 miles tends to After an, a car with 150,000 miles tends to need a bit more than an occasional oil change. But with preowned equipment, that type of thinking is often incorrect, Sheldon

"We have clients who've had our equipment for five years or longer, and we lems," he says. "It's not like this equipment has a limited shelf life like other types of products."

If the equipment is from a reputable vendor, such Cisco or IBM, there isn't a sense of "planned obsolescence" that comes with other types of products, such as vacuum cleaners or laptops.

"Certain technology products were built to last, and so they do," Sheldon adds. "And if you encounter one that doesn't, a reputable company will have it backed up

Making sure that the warranties offered by preowned equipment dealers are adequate is Go to Page 10

Tape To Disk

The Challenges Of **Changing Backups**

by Robyn Weisman

MANY SMEs STILL treat backup as if they are using a VCR that flashes "12:00 AM." While tape-based backups are reliable and cheap, they, like videocassettes, require the user to rewind or fast-forward to recover, say, a lost spreadsheet.

Research firm IDC predicts that the digital universe in 2011 will equal almost 1,800 exabytes (1.8 trillion gigabytes), 10 times the size it was in 2006. If trying to find that size it was in 2000. It trying to find that spreadsheet within your tape backups is tedious now, imagine trying to locate it a few

years from now amid your petabytes of data.

As a result, more and more SMEs are considering disk-based backup as a longterm solution. "Compared with tape-based storage systems, disk-based storage deliv-ers an order of magnitude benefit in terms

operations that once took hours or even operations that once took hours of even days now can take minutes," says Philip oays now can take minutes," says Philip Fote, storage product marketing manager at EMC (www.emc.com). But migrating to disk-based backup is

But migrating to disk-based backup is expensive. It often requires a new infra-structure. And if you intend only to set up an onsite disk-based backup solution, you an onsite disk-based backup solution, you may find that you lack the physical space to keep all those drives. Given the complexity and urgency of the situation, where do you

Know What You Are Backing Up

First off, make sure you understand what you are backing up. "This seems easy, but people rarely do. They get into habits," says David Barley, CTO of digital archiv ing services provider Casdex (www.cas ing services). "That's the way we've always done it' is the million-dollar mistale."

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